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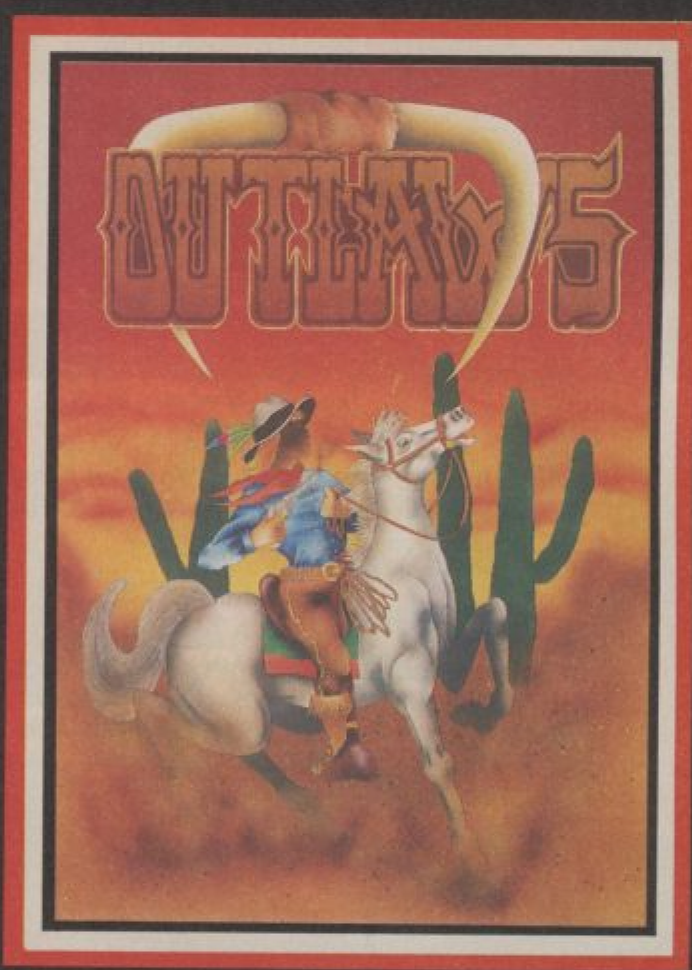
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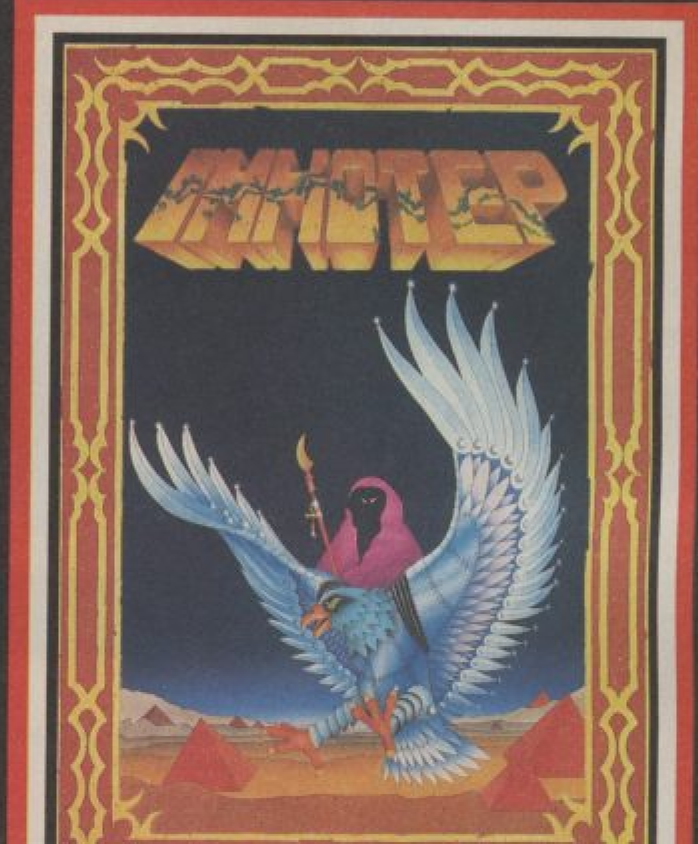
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COMMODORE 64









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Amiga goes public

If you're eager to be one of the first people to gloat over a real live Amiga, you'll have to get yourself to the Which Computer? Show (14-17 January) at the National Exhibition Centre, Birmingham. Commodore UK has (at last) decided to show it there, for the first time to the public. Until now, only journalists and the computer trade have been allowed a viewing.

Since Which Computer? is really a business show, it looks as though Commodore is backing up its resolve to position the Amiga primarily as a business machine. It also looks like starting Commodore's run-up to a launch. It can't be far off . . .



Britsoft Storms US

With the mighty *US Gold* dominating the 64 games market with top quality American imports it's been tougher than tough for most British software houses to keep pace. But now there are signs that the tide is turning, with some of our best games giving the Yanks a run for their money on their home ground.

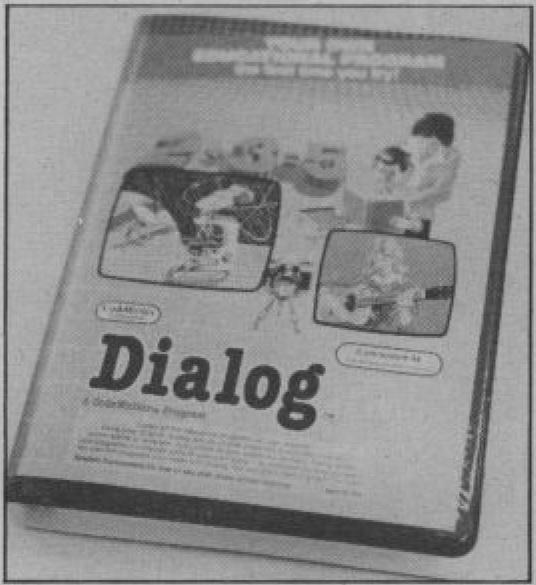
Leading the assault on the US Charts are Melbourne House's two best know games of all time: *The Hobbit* and *Way of the Exploding Fist. Fist* entered the charts at a very respectable number twenty but what has really made the Adventure-mad Americans sit up and take notice is *The Hobbit* — straight in at Number 10. That's even higher than Infocom's latest game, *Wishbringer*, languishing at number 17.

But if Melbourne House have the biggest success to date they are not the first British software house to get their games on sale in the States.

Llamasoft were the first, after an executive from the American HES company spotted Jeff Minter's *Defender* for the Vic-20 at the 1982 Commodore Show in London. It was rapidly put on cartridge, it's name changed from Defender to Aggressor, according to Minter "to avoid copyright hassles" and did very nicely thank you very much.

It was not until this year that a major 64 breakthrough was reached — when Digital Integration successfully licensed *Fighter Pilot* to Epyx. Epyx are America's number one arcade games house — the people who brought you *Summer Games, Winter Games, Impossible Mission,* and *Pitstop I & II.*

The word from other major British games manufacturers is that Digital Integration and Melbourne House have well and truly opened the flood gates with Beyond, Firebired (under the Rainbird Flag), CRL, and PSS all announcing major licensing deals with top American software house. The days of one-way traffic across the Atlantic could now be history.

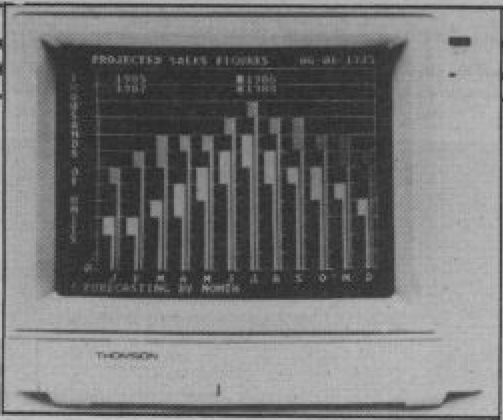


Shorts

Teachers Pet: If you're interested in educational software but can't find any suitable programs, you might be tempted to write your own. That's what the American Codewriter Corporation hopes because it's produced an educational program development system called *Dialog*. The package lets you write stand-alone interactive software using text, interactive test, 'quiz' and timing routines — no programming skills are necessary. Dialog now has a graphics editor for designing illustrative screens for inclusion in the final program. The whole lot costs £48.50 (disk only), from Guernsey-based Etcetera Ltd. More information on 0481 44955.

Shorts

Weightwatchers: If counting all those calories and carbohydrates leaves you with no time to actually eat anything, Sable Software's *Calorie Counter* for the 64, may be for you. It lists around 1000 different foods, arranged in 15 categories (fish, meat, alcohol, vegetables, fruit etc), giving calorie and carbohydrate values per ounce or gram. You simply choose the foods, key in the weight and the program works out the totals. And it's all done using the function keys. The program costs £6.95 mail order from Sable, on 01-368 530. By the way, did you know a pickled gherkin contains only one calorie?

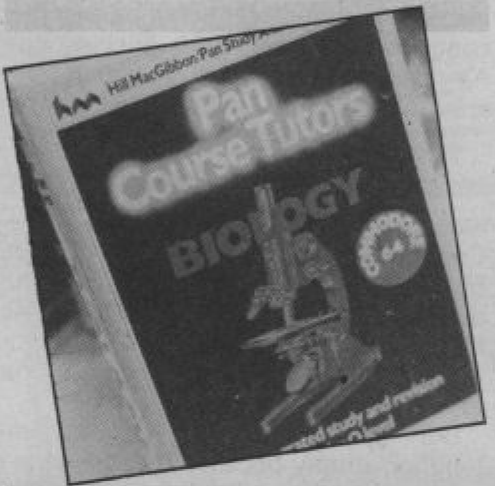


New monitors for Thomson

Thomson Grand Public, the company that makes Telefunken television sets is set to launch its range of eight colour monitors on the UK market, and they're all Commodore compatible. Starting at £85 for the standard low resolution monochrome model, the range also includes several hi-res colour monitors with both composite video and RGBI inputs.

The snappily named CM31481VI looks set to provide a viable alternative to Commodore's 1901 monitor for C128 owners. Features include composite video/RGBI input, 80 column text display and monochrome green or amber display for word processing and other text displays. At £260 it weighs in £40 cheaper than the 1901.

Thomson aim to have the full range in the shops by Christmas which sounds a little on the optimistic side. A more realistic date would be late January.



Shorts

Wiser reviser: If you're revising for CSE or 'O' Levels, you're probably ploughing through one of the *Pan Study Aid* books. Five of those titles, (Biology, French, Maths, Physics and Chemistry) now come with software on tape, for your 64. According to the blurb, the software modules contain 'carefully structured questions utilizing dynamic graphics' and also feature test programs that monitor how well you're getting on. More information on 01-493 7070.

Going for a chat on Compunet and Micronet

The communications revolution has given us the potential to do amazing things. And how are we using it? Well, to indulge in a little idle chatting. Both Micronet and Compunet now have facilities to let you do some on-line chin wagging.

Micronet started it all with its *Celebrity Chatline* which has dragged in megapersonalities like Feargal Sharkey, Acorn boss Alex Reid, TV micro know-all Ian MacNaught Davies and galaxian hitchhiker Douglas Adams.

But questions posed by Micronet pundits reached new heights with this googly bowled to Jeff Minter: "Hi there Jeff. How's it feel to be one of the world's most famous hippies? I mean like wow, all the publicity you get. Is it at all hassling?" To which the great camel-meister replied: "Er well, er. Not really — only when I get called 'Neil' on the street" Envious of such exchanges, Compunet has (in fits and starts) launched what it calls *Partyline*. It claims that, in addition to offering the usual 'chat' facilities, you get a 25K buffer which lets you scroll back and forth in the conversation, print it or save it to disk. There's also a WHO command to let you see who else in on-line, and a 'private room' facility for those top secret conferences — or for discussing how much the whole business is costing you.

Shorts

Split vision: A new company, Sabre Software, is marketing a natty little device that lets you use the Commodore 1701 or any other composite monitor for 80-column work on the C-128. It's called *Visionswitch* 128 and costs £9.95. It plugs into both the video and RGBI sockets on the 128 and has a toggle switch for 40 and 80 columns. There's also a 6mm stereo socket for connecting the 128 to your stereo. We're trying to get one for our '128 monitor' survey next month.

MOLE COMPETITION WINNERS:

That adolescent acned intellectual, Adrian Mole, must have a lot of fans out there, judging by the pile of entries we received for last month's Mole Competition. Nearly all of you got the answer right — Box. But the first ten out of our box get the covetted game. Moleish congrats to: MH Crawford of Blackpool, RJ Postle of Gwent, Colin Spiller of Worthing, Halina Watkins of Gwent, L Hardaker of Surrey, Stefan Dobrowolski of Liverpool, James Clark of Glasgow, Leigh Riby of Hull, A Saxton of Leicester and Adam Kelly of Cleveland.



It's the real thing, our July C-128 Competition megaprize. Lucky winner John Lambshead grabs the box from Emma Stirling, representing Commodore UK — he's had a long wait. Commodore User editorial staff look on enviously and prepare to ambush him before he can leave Priory Court.

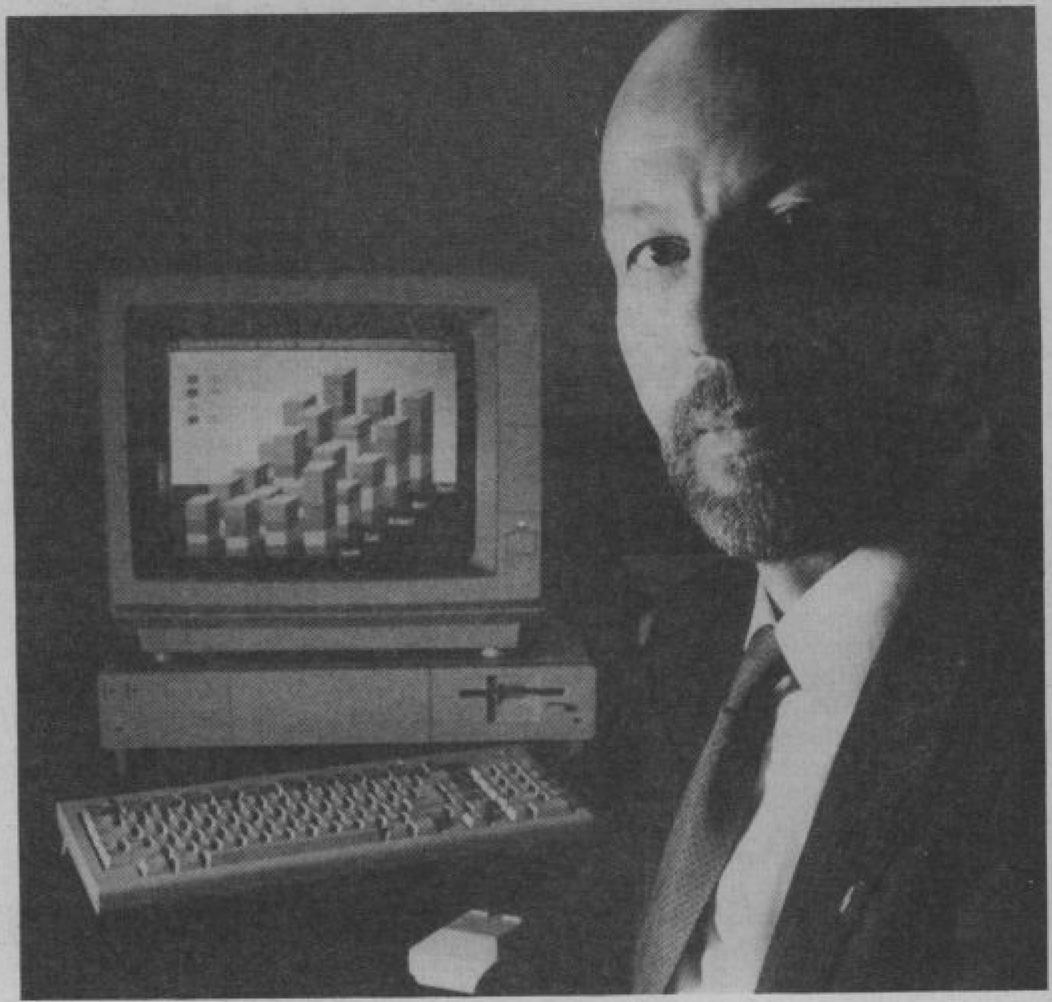
The Amiga must be the most wanted micro around right now — and it's still not made an appearance in the UK. This all-singing all-dancing machine has captured the imagination of a vast variety of people: games players, musicians, designers, programmers, businessmen — the list seems endless. But, at more than £1,000, will anyone actually buy it?

Commodore knows it's got a problem with the Amiga. As Chris Kaday, UK marketing boss, points out: "We've got to be very careful about calling the Amiga an everything machine: everything usually becomes nothing".

The problem is this: despite its great graphics, sound, speech and video facilities, the Amiga is too dear to be a 'home' micro. So to the dismay of games players, Commodore is plugging the Amiga as primarily a business machine; it won't be found in Smiths, Dixons or Rumbelows, only in specialist computer shops.

Commodore reckons the business market is more stable than the home market. Calling the Amiga an 'entertainment' machine, according to Commodore, means businessmen won't bother looking at it.

That may be muddled thinking. Commodore likes to describe the Amiga as 'leading-edge' and 'state-of-the-art' technology. That's no lie, but businesses tend to be pretty unadventurous about computers. That's why the boring and low-tech IBM PC is still selling like hot cakes. In any case, you can now get a PC-lookalike for around £800.



Chris Kaday: "Amiga makes all other games look pedestrian."

Who will buy the AMIGA?

Playing Games

There's precious little news of business software being developed on the Amiga. It's the games producers who've shown the most enthusiasm, big companies like *Infocom, Broderbund* and *Electronic Arts*. UK software houses too, are clamouring to get their hands on the machine. Some, like *Llamasoft, Mirrorsoft, Melbourne House* and *The Edge*, are already burning the midnight oil with it.

Some software is already nearing completion. Infocom, for example, is converting its range of adventure titles for the Amiga. There's a version of the Microsoft Flight Simulator, a range of beginner and advanced graphics, synthesiser and animation packages — and the list is growing. All these companies are expecting (perhaps hoping?) the Amiga will sell in the home. At over £1,000, the question-marks are large.

Chris Kaday won't commit himself on how many Amigas will be sold to British homes in '86, but he does see it as a year of change, one in which traditional business/ games/ family entertainment barriers are broken down — and we've heard all that before.

Kaday accepts the Amiga doesn't have the mass-market appeal of the 64, but he does see it as the "next stage"for the enormous number of computer users. "If you're playing games, you're looking for the next step. The Amiga makes all other games look pedestrian" — at £1,000, so it should.

"People spend £1,000 on things like holidays, furniture and fitted kitchens, why not on an Amiga?" That sounds like wishful thinking; computing for the whole family has never really taken off. Will the Amiga make it happen? And if so, what will mum and dad do with it?

Still, reports from America look good: Commodore has already signed 615 dealers and those who were ordering a handful of machines are now going for 30-40 per order. Commodore is also spending huge amounts on advertising (*US Hotline, this issue*). But the Americans were buying Apple Macintoshes whilst we were scraping together enough money for a 64, Spectrum or Amstrad. There's just more money around over there.

Conclusions

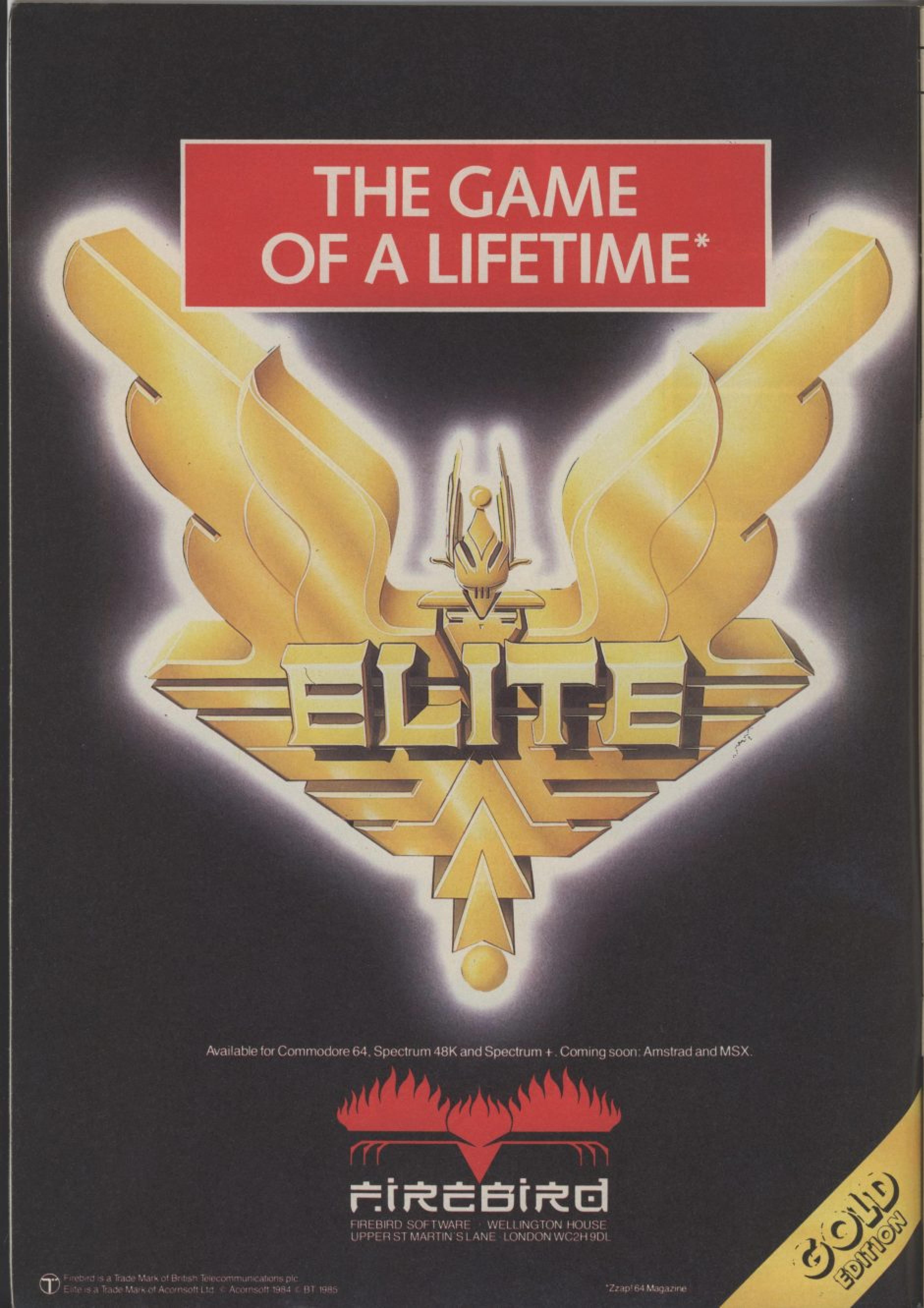
Commodore knows it's onto something big with the Amiga and also knows that developing it is costing a small fortune. In fact, a substantial portion of '85 losses can be blamed on it. So there's no room for mistakes.

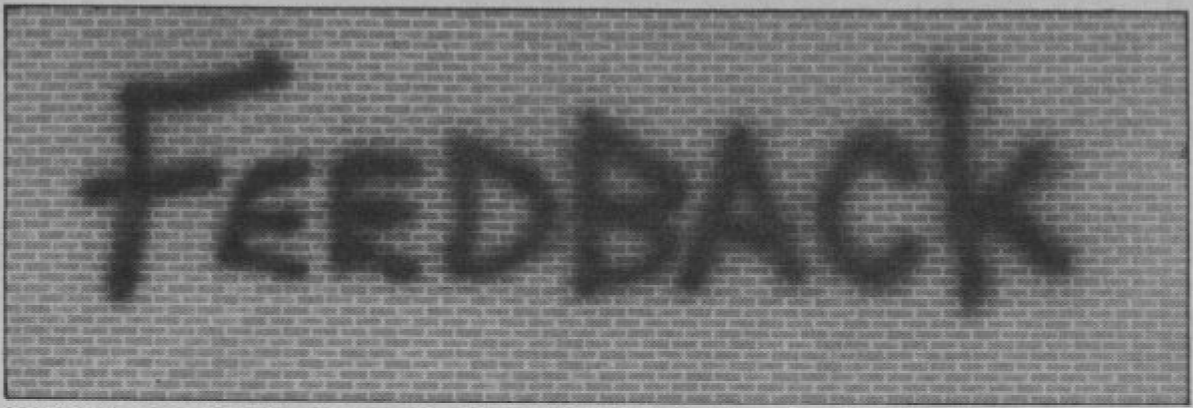
But getting it right has become tougher, simply because the Amiga is a new species, it won't fall into any of the nice little pigeon-holes in the market. As Chris Kaday points out: "you've got to look at the market as it will be tomorrow. It will be different — and it will be different because of Amiga".

But Commodore has the luxury of time on its side, knowing that the competition will take a long time to catch up, and that the Amiga itself is capable of generating applications that will make a wide range of users want to buy it. At present, it's a case of 'you gets what you pay for' — there are no cheap thrills with Amiga.

Bohdan Buciak


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Auto run

Dear Commodore User,
I was surprised to read Tommy's reply, in the November issue, to a reader's request for advice on getting a program to auto-run from the 1541 disk drive. Tommy stated that there was 'no simple way' to do this and proceeded to give an explanation of why this was so.

A method of auto-running that I have used for sometime goes as follows:-
Type **LOAD "PROGRAM"**, 8: (note the colon) then press **SHIFT/RUN STOP**. **LOAD** will appear after the colon. The 1541 will go through its usual routine and the program will auto-run when it has loaded. Couldn't be simpler!

While writing I would like to say that I like your mag as it has good balance but I would like to see programs of a more practical nature rather than arcade-type games which would have little lasting value.
John Farrar,
Cornwall.

Libel suite

Dear Commodore User,
I get a number of Commodore magazines. I saw in your November issue a review of *Doughboy*. Peter Jones, your reviewer, thought highly of *Doughboy* and said "hard to find any criticism". But in the November issue of ZZap 64 they found plenty to criticise about it. This made me wonder. Did U.S. Gold bribe Peter Jones in giving the game a good review, or is it a matter of personal taste?
Milan Rados,
Northampton.

As well as being a member of the G Force Peter Jones is himself a top games programmer. Two good reasons why he should know what he's talking about. Any more feeble accusations of bribery and you'll be hearing from our solicitors!

Over to you Rumpole!

Ultimate sanction

Dear Commodore User,
I promise I will never disbelieve you again. I read your *Rescue on Fractalus* review in the September issue, but, I decided to believe Jeff Minter's words (silly boy) rather than yours. It was £10 down the drain. Honestly, I think your mag is the best for reviews and I nearly always agree with them.

You were right on *Summer Games II*, *Frank Bruno's Boxing* and *Way of the Exploding Fist*(after reading your exclusive review, I rushed out and bought it and was glad I did). I think the G-Force is good, but it lacks one thing — me!

Hot Shots was brilliant at the beginning, but now is becoming slightly trashy. Does anybody *really* want to know what type of cars people drive or that people from the Ministry use Vic-20s to transmit information between offices. Bring back all the juicy gossip.

Now a word of advice to all true staunch Commodore 64 owners. Please do not buy any Ultimate games. They totally ignored CBM owners for ages, concentrating solely on the Spectrum. Only recently do they start producing Commodore games. Well, they can stick them. We have plenty of other, decent software houses to buy games from. I for one will never buy an Ultimate game and I hope neither will any true Commodore supporter.
Keep up the great reviews and news.
David Sayers,
Londonderry,
N. Ireland.

Sounds like you learnt your lesson the hard way, but at least you'll know who to believe in future. Your attitude towards Ultimate is hard to understand. Surely the fact that they are producing good games for the 64 is something to be glad about.

'X' certificate

Dear Commodore User,
I read Darryl Webb's letter in the November issue, and I think he is totally over the top. What right does he have to say what games people should or should not be allowed to play? My favourite games are *Raid over Moscow* and *Mad Doctor*. But that doesn't mean I'm about to go dropping bombs on Russians or digging up bodies in the graveyard.

A much better idea would be to have a certificate system like they do at the cinema so people know what kind of games they are buying. For example, Palace Software's *The Evil Dead* would be X-rated, but the Rupert Bear game would obviously get a U-rating.

Darryl Webb also says that aliens might not like us much if they discover that we spend all our time blasting them on computers. WHO CARES! If you ask me it's a good job we're getting all this practice in preparation for the real thing.
P.D. Smithson,
Welwyn Garden City,
Herts.

We don't think much of your ideas — you've obviously never watched Close Encounters. But what do the rest of you think out there?

A doctor writes

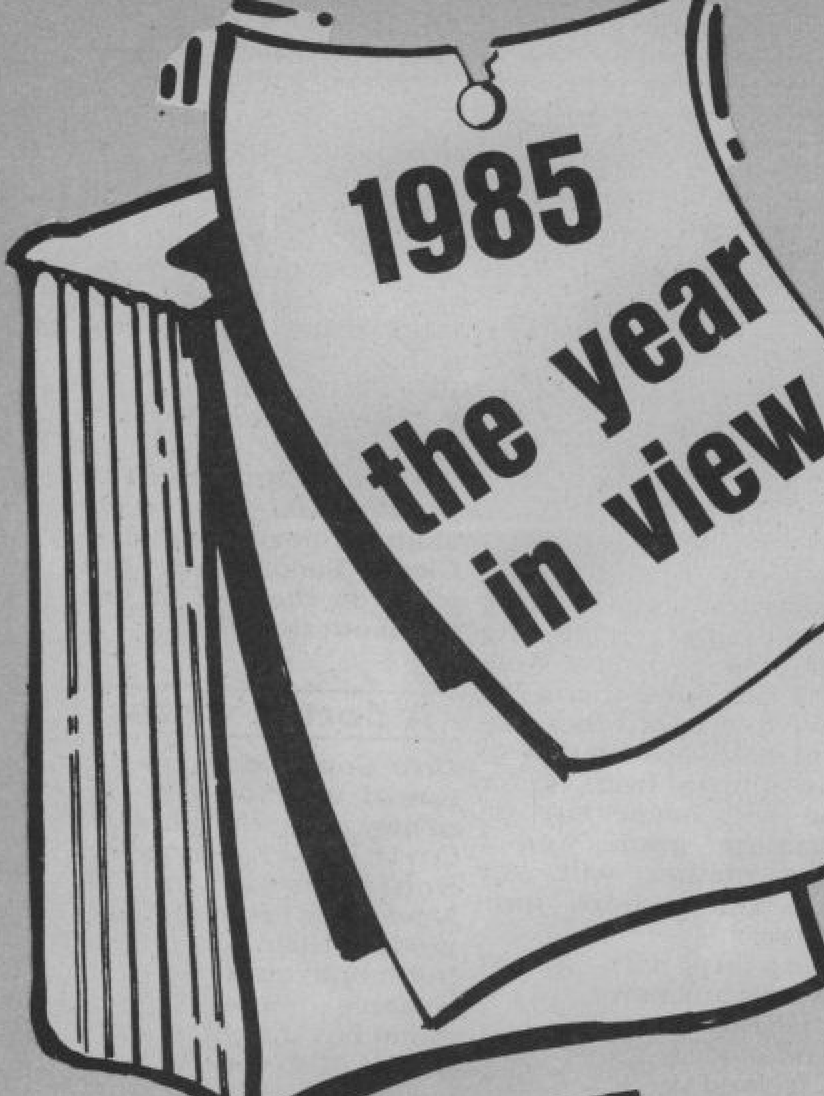
Dear Commodore User,
I read with dismay the review of a new game by Quicksilva called *Schizofrenia* in the November issue of *Commodore User*. Not only is Schizophrenia an unsuitable subject for a game but the theme continues the widely held, but mistaken belief that Schizophrenia is the same as dual personality.

Schizophrenia is a serious and sad mental illness which is not funny or amusing in any way. What would the public think of a game called *Cancer*? This game is titled in the worst of taste and I would suggest it be withdrawn and issued under a new name if necessary. What about *Doppelganger* or something similar?

Schizophrenia does not mean a "Jekyll and Hyde" personality but it is a serious illness involving a great deal of suffering for the patient and his relatives. Not only is this game named offensively but it misinforms as well.
Alan Vyden,
(Psychiatrist),
Birmingham.

The fact is that most people, albeit mistakenly do associate schizophrenia with split personality. Whilst you could argue that Quicksilva's game is nonetheless in bad taste, how relevant is this when you consider the number of games around involving war, murder, genocide and other, equally unsavoury themes?

1985 the year in view



As we await the dawning of a bright New Year filled with joy and excitement for the good things to come, we've taken time out to look nostalgically over our shoulders at this last year. We plot the successes, the failures, the trials and tribulations and the humorous moments that have made 1985 as boring as any other year we've witnessed.

JANUARY

Champagne flows at Commodore as 64 is once again voted Home Computer of the Year, beating off fierce competition from BBC Rip-off B and Sinklower 16K Chiclet. Commodore wheels in new Plus/4 megasophisticated machine as contender for next year's prize. Despite its 'powerful' built-in software, journalists fail to suppress laughter. Meanwhile, software houses opt for new Bright Idea: Game of the Film . . . Pratsoft flops with *Ghandi* game, Berksoft drops idea based on TV series 'Holocaust', but Activision has passable success with *Ghostbusters.*

FEBRUARY

Commodore confronts dismal Christmas financial figures. Failure to reduce 64 to £15.95 has resulted in poor sales. Employees at Acorn, Sinklower and Commodore asked to store stocks of unsold micros in garden sheds to relieve congestion. 64 production is cut to three per week with employees taking turns to stick the keys on. Ocean attempt to sign promotion deal with Peters and Lee but are forced to put up with Frankie goes to Hollywood instead.

MARCH

Having cracked the '64 fusion' process, Commodore announces new C-128 at prestigious Chicago computer fair. Not only 64 compatible, it will run industry-standard Slow-Dos operating system. Plans for C-512 machine featuring eight 'fused' 64s is scrapped despite potential to get rid of unsold stock. Software industry enters 'macho' phase — US Gold releases *Conan* and *Indiana Jones* games but neither manage to muscle into the charts. Plus/4 prices slashed by half — still nobody buys it.

APRIL

Breakdancing games hit the streets and are immediately moved on by police for impersonating hi-res graphics. Meanwhile a dark horse, *Impossible Mission*, lurches up the Charts. Shock news as Commodore boss resigns to be replaced by potential Tomorrow's World presenter. William Woolard lookalike Nick Bessey is installed and immediately orders large stockpile of unsold micros to be removed from his office.

MAY

Massive security campaign as *Commodore User* hardware expert arrives at undisclosed destination to review the UK's only C-128. Story generates such a sensation that Commodore decide to build another one. Meanwhile, launch of Commodore Personal Computer generates surprising lack of enthusiasm. Billed as only the 237th micro to be IBM compatible the new machine is destined to make no impact whatsoever. Game based on finger-flickin' 3-2-1 TV programme is announced but never released on humanitarian grounds.



LOOK BACK IN ANGER!

JUNE

Commodore Show-time. Commodore plans to build new venue with unsold micros but settles for a seedy hotel in West London. Potential exhibitors wooed by promise of massive influx of visitors and appearance of 128. The few visitors to find the venue are disappointed to hear 128 won't be available until the year 2000. We announce exclusively that Joan Collins will not be appearing in a computer game, thus earning the Non-Story of the Year Award.

JULY

News of mind-boggling new Commodore micro floods in from Chicago Computer Fair. New Commodore Amazer dominates show without actually being there. Meanwhile, Commodore again confronts dismal financial results and plans to offset losses by selling the new Amazer for $50,000. Melbourne House's Fist explodes onto the scene. An issue of this magazine is nearly missed because everyone is playing it.

AUGUST

Amazing specifications of new Amazer filter through, three amazing new chips, amazing memory, amazing graphics and sound, amazing animation — but industry pundits point to lack of 64 compatibility. In the UK, Commodore offers bargains to counter traditional summer slump. 64 packaged up with 15-day 'Greek Island' holiday, suntan lotion, Diocalm tablets, and datasette headcleaner.



SEPTEMBER

Visitors flock to PCW Show to see Amscheap 128. Already available in shops, the complete kit is £5000 cheaper than C-128. Commodore counteracts by putting forward 128 sale date to 1995. Meanwhile, Commodore launch Amazer at prestigious New York venue and claim it to be Most Unaffordable Computer ever. Life-guards stand by to rescusitate over-amazed onlookers. Clark Kent appears at *Commodore User* office claiming to be Superman. Nobody listens to him, being too busy playing *Summer Games II*.

OCTOBER

Rumours circulate that C-128s are now available on the High Street — but without monitor or disk drive. Amscheap 128 sales soar while frustrated 128 buyers search vainly for peripherals — Commodore International announce more dismal financial results. Software houses compete to produce Game With Most Muscle — Frank Bruno beats Barry McGuigan by a long jab, but is blown away by Rambo in the macho game stakes. Domark executives cancel Carribean holiday as £25,000 Eureka! winner is announced.

NOVEMBER

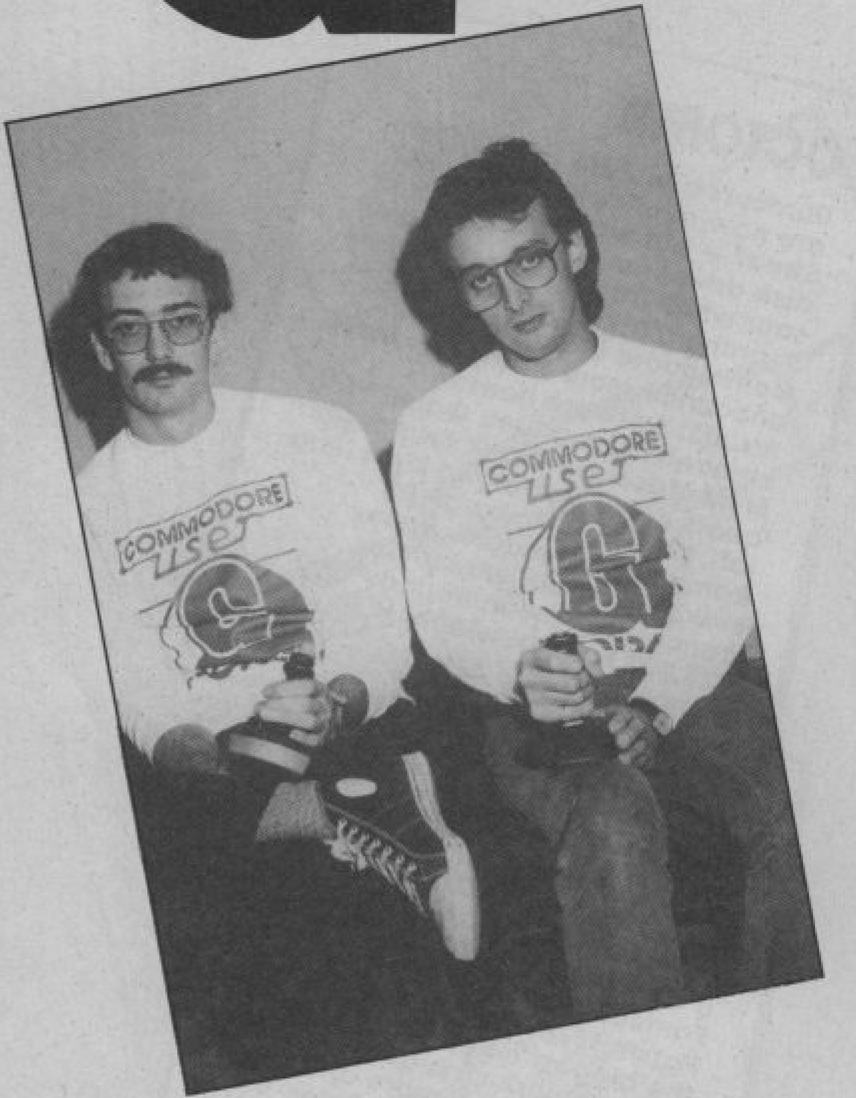
Commodore announces 64 Hamper Pack for Christmas. Enclosed is a turkey, (sorry, a 64), a datasette and box of Nearly-Famous Names liqueurs. Hotshots reveals Porsche to be the biggest investor in UK software industry. US Gold prepares to buy more of them with proceeds from *Winter Games*.

DECEMBER

Industry swings to the rings of the cash registers. Commodore sweats it out, hoping that Amscheap will encounter 'severe supply problems'. Sinklower considers in-the-box offer from Granny Baxter's Olde Englishe Christmas Puds. Potential 128 buyers give up and opt for Trivial Pursuit instead. Activision announce *Little Computer People* — we call in Rentokil and have ours gassed. In a state of confused drunkenness, industry bosses pronounce '85 to have been a Good Year — and try to suppress dismal sobbing.

G WARS

Mean Team Get Tough



Sutherland and Farrell — speaking out for war games.

The G Force have been having a hard time of it lately with the game makers holding back their Christmas releases until the very last minute.

This means we are unable to bring you the promised reviews of *Geoff Capes, Zoids, Rock and Wrestle, Lord of the Rings, Mercenary,* and *Elektra Glide.*

But fret not for the G Force haven't broken any promises yet and neither will they let you down on the above games. So take note software houses — get us those games quick or there will be much more than just another black list in our February issue.

But late games are not the only problems that our gallant boys have had to deal with. This month they've also been crossing swords with a certain Richard Lewis, Tory Councillor for Swansea. The honourable Councillor wants PSS's latest game, *Falklands '82* banned. Mr Lewis told the *Sunday People* "We gave the Argies a damn good hiding and it's ridiculous that the reputation of the British army should be left to a game".

War games experts and G Force members Simon Farrell and Jon Sutherland like the game (reviewed, page 32). Jon Sutherland says: "We don't approve of war, any war. But you have to accept that war exists, and the history of it is a matter of public record, PSS are just as entitled to write a game about it as anyone who publishes magazine articles, and TV specials".

But isn't the game just an excuse to bash the Argies on-screen? "No." says Simon Farrell. "It reconstructs the actual events as closely as is possible in a war game. Sure, it is possible for the Argentinians to win in Falklands '82, but that was also possible in the real war. It is this potential to explore possibilites that makes war games useful for historical study — you can look at the what-if possibilities".

Simon and Jon have had their say — now it's your chance to have yours. We have a free Commodore User T-Shirt to give away for published letters on our Letters page. So let us know *your* opinions.

There's more blood and guts on page 18 when *Rambo* squares up to *Commando.* Mike 'Hot Shots' Pattenden was so keen to bring you his verdict on which was the best game that he practiced the arcade version of Commando every afternoon for a week in a local hostelry (*Such dedication. Ed*) whilst he waited for the 64 version to arrive.

If terror is more your cup of tea than mass death on the battlefield then this month's Screen Scene has something for you as the Editor gets scared out of his wits with *Friday 13th* from Domark — the game based on the X-rated horror film. It's a scream on page 28.

It's not all horror though — you will be glad to learn there are also a few laughs with the Flintstones in *Yabba Dabba Doo.*

This month's Screen Scene has its usual treasure of scoop previews and competitions. Eyes right — now read on. (*Your getting a bit soldierish aren't you. Must be all those war games. Ed.*)

Above. Mike Pattenden practices Commando in readiness for the big test.



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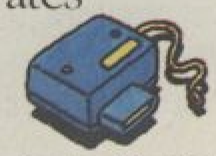


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SCREEN STAR ★

Rambo vs

RAMBO vs COMMANDO

From the big screen to the monitor, we bring the war to end all wars. John Rambo squares up to Super Joe in an explosive confrontation that damn near left our 64 a burnt out hulk. This wasn't just a muscle fight though, there's two big soundtracks locked in these games as well, not to mention the rivalry of two big software houses competing for the biggest slice of the Christmas market. So who had won when the smoke cleared?



Burst into the camp and free the tied up POW. Then it's a dash to the waiting chopper.

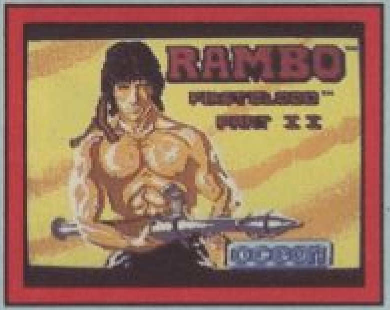
Rambo
Commodore 64/128
Ocean
Price: £8.95/cass

We've kept you in touch with the progress of Rambo since Ocean announced the deal and now we've got the finished thing. As they promised in November Tony Pomfrett and Dave Collier have come up with the goods.

As John Rambo your mission is to ascertain the existence of captured G.I.'s back in 'Nam. You are told quite clearly in the loading screen not to engage the enemy, but if you don't then you simply get a message telling you that you've found some and the game ends. Which is no fun at all.

No, what you really want to do is rescue the prisoner in the camp and cut loose with machine gun and explosive arrows. There are two approaches to this. You either make your way quietly up to the camp avoiding the gooks, maybe dropping the odd one with a knife throw, and then burst into the camp catching the guards unawares — or you can just switch to explosive arrows and go for it, blowing great holes out of the jungle and the camp and freeing the tied up GI.

Either way once you've got the man it's off to the helicopter. If you make it, the next stage begins — rescuing the rest of the POWs. The chopper is disappointingly small, but that doesn't matter because you can't spend long in it because your energy drains pretty quickly. Fly it straight to the helipad and rescue the rest of the men. At the time of writing this is as far as I've got, but you've got to free the rest of the prisoners using the right weapons. Then you get the



chopper chase sequence.

The graphics are good but not astounding, here I think Commando has the edge, and I was a little disappointed that Rambo had shrunk slightly from the man I saw on my preview disk. Another criticism is the one I applied to *Commando*, having to use the space bar to implement weapons. At least on Elite's effort there are only grenades to throw, here you get arrows, machine guns, knives, explosive arrows and bazooka. Having to search for the right one is the difference between life and death.

It's certainly a tough game but I'm not sure that the challenge is particularly hard. Six hits are enough to drain even Rambo's life away, and those gooks are better shots than they are in the film. The strategy element gives it an added edge of interest, though I have a feeling that once you've cracked it the game becomes quite an easy challenge, and more of a high scoring competition.

The icing on the cake is the sound. I said *Commando*'s was good but *Rambo*'s is stupendous and the man behind it is none other than Martin Galway whose work on *Hypersports* and *Never Ending Story* has already been lauded in this mag. He's getting sounds out of the 64 that no-one else is, sounds like echo and reverb that make you look round the room for the speakers.

Mike Pattenden

Graphics	★★★
Sound	★★★★★
Toughness	★★★★
Staying Power	★★★★
Value	★★★★

THE VERDICT

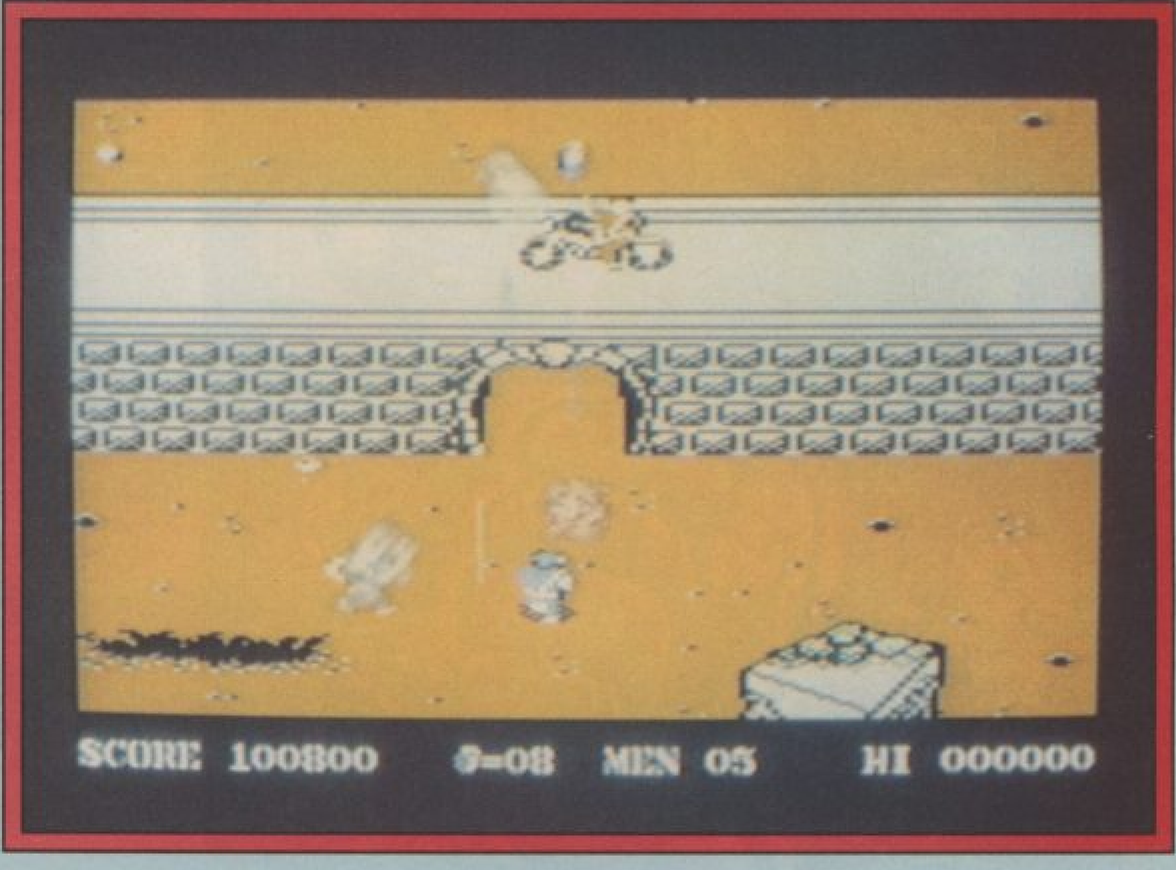
We undoubtedly have two biggies here. I'm exhausted from trying to review them, but I can just gather enough energy to award Rambo my commendation. What really swung it for Ocean was the strategy element, the sound and that brilliant explosive arrow option that let's you go berserk and raise entire lumps of jungle to the ground. Super Joe will just have to be content with being mentioned in despatches.

The machine-gun stands against the temple wall. Just run through it to pick it up.



Commando

Commando
Commodore 64/128
Elite
Price: £7.95/cass



Under the bridge, but don't get a grenade lobbed on you.

At last the official version of the Capcom arcade game that's reckoned to be the biggest seller since Track 'n' Field. Elite have been working on this for months pausing only to take out an injunction on Alligata for their unlicensed *Who Dares Wins*.

The first thing I noticed about it was a similarity to the Alligata version and no wonder, because when I loaded it again later I noticed that the programmer was none other than Chris Butler, the man behind *Who Dares Wins!*

If you haven't seen the arcade machine and I'm probably wasting my time here telling you, but the idea of the game is simply to cut a path through masses of enemy troops armed only with an M60 machine gun and a very supple trigger finger.

After playing this I'd say there were a few problems. Firstly I was hoping the figure would be a bit larger, he's a third of the size of the original, but more importantly on some occasions he vanishes completely. In fact there is evidence here that suggests Elite finished this version off rather quickly even though it was late, because the screen gets distrubed sometimes and some of the vehicles betray glitches or are unrecognisable completely.

The enemy tries to stop you crossing the river with deadly fire power. Approach from the right.



Nevertheless this is a very faithful rendition of the original. Elite have packed all the furious action in with all the locations. I've been shot in the back, run over, grenaded and fallen down trenches until I'm dizzy. I wish you didn't have to hit the space bar every time you wanted to lob a grenade though. This is not the case on the Spectrum game. There you just hold the fire button down for longer. In fact their version seems to be better all round than the 64, apart from the sound.

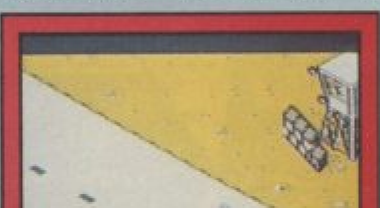
The music is particularly good and I forgive Elite completely for putting a version of the awful Living on Video as the leading music. The game soundtrack lends itself well to the hectic action taking place on screen and slows to a hummable soothing tune for the excellent scoreboard facility.

Elite certainly score highly with this game, but I'm left feeling that it could've been slightly better. I know it's very popular as it is, but I find the game itself a bit samey. It's a must for fans of the arcade machine and other Access style shoot 'em ups, but I don't think it taxes your imagination overmuch.

Mike Pattenden

Graphics	★★★★
Sound	★★★★
Toughness	★★★★
Staying Power	★★★
Value	★★★★

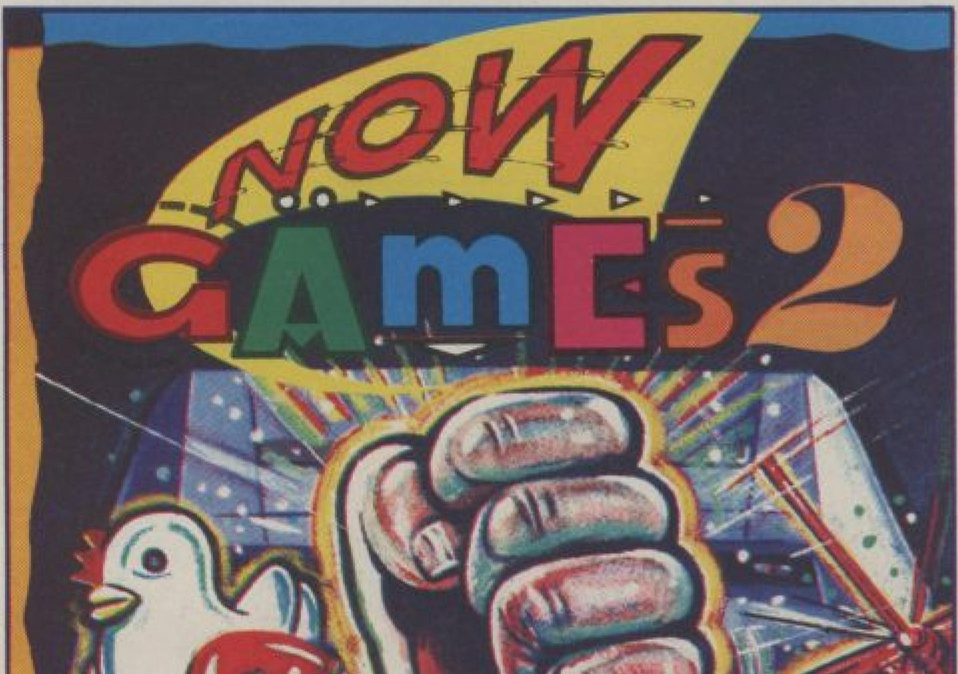
The runway — not far to HQ now.



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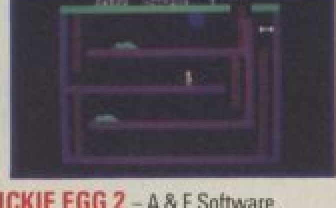
1. AIRWOLF – Elite Systems Ltd
Stringfellow Hawke must use his helicopter to free five imprisoned scientists in this exciting arcade game which takes place in a subterranean terrorist base!



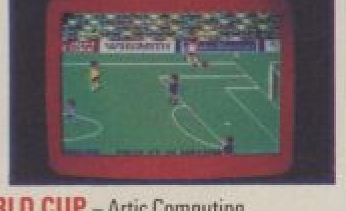
2. TIR NA NOG – Gargoyle Games
This remarkable interactive graphic adventure allows you to play the mythological Celtic, Cuchulainn, searching for the fragments of the Seal of Calum.



3. CAULDRON – Palace Software
Take up the witches' challenge and unravel the mysteries of this beautiful land in this striking arcade adventure.



4. CHUCKIE EGG 2 – A & F Software
Help Hen House Harry in the smooth running of the A & F Chocolate Egg Factory! He must find equipment and find out where to use it in this amusing arcade game.



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All screenshots from the Commodore 64

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RAMBO COMPETITION



Since we're so impressed by these two games we've decided to give you the chance to play them both at home. That's right we've got 30 free copies of *Rambo* and *Commando* to give away in this month's Screen Scene Competition.

All you have to do is take a picture of yourself dressed up as Rambo. You can do it funny or serious but we want to see what you can come up with. Pictured left is Mike Pattenden's effort to look the part. Pretty poor I think you'll agree. We know you can do better so get those pictures — colour, black and white or transparencies in the post as quick as possible.

The best effort will get a special extra prize. As a tie-breaker please supply a hint or tip on a recent computer game.

Send your entries to Rambolookalike Competition, Commodore User, 30-32 Farringdon Lane, London EC1R 3AU. Entries to reach us no later than January 15 1986.

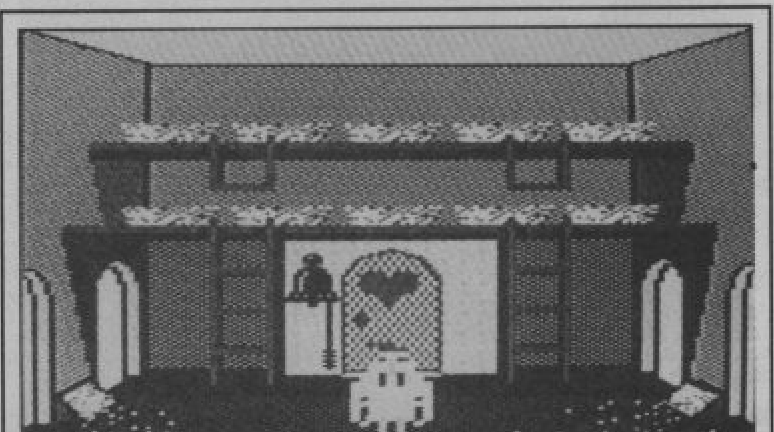
Chickin Chase
Commodore 64/128
Firebird
Price: £3.95/cass

Whacky, way out, weird, strange, *Chickin Chase* is all of these things and less. Could this have anything to do with the fact that it was written by a Frenchman? I dunno, or should that be Je ne sais? Either way, this is the first software I've ever seen with naughty bits in it. Wait, hold on, come back. Before you all rush off to W H Smiths I'd better explain.

You are a cock. The kind that wakes people up in the morning. But, this cock's life is a busy one. First off it's into the hen house with Madam to get some egg production done. This is described in the blurb as a 'gallant visit'. When your gallant visit is over and done with, Madam promptly emerges from the hen house and plops an egg into one of the little nests lining the walls.

This is where the trouble starts. Every rodent in the neighbourhood is out to get their hands on the eggs. Rats, hedgehogs, snakes, the lot (yes I know they're not all rodents, don't bother to write in).You have to fight them all off with a sharp peck on the bonce.

If one of them manages to snatch an egg, then a very annoyed Madam belts you over the head with a rolling pin, who ever heard of a hen with a rolling pin? Anyway, that's not all. After about a minute the chick hatches out, runs to the door of the henhouse, rings a little bell and disappears inside. Dead cute, but here's the unbelievable bit. If you haven't paid another 'gallant visit' by this time it's the rolling pin treatment all over again. Whoever heard of a nymphomaniac hen with a rolling pin?



The whole thing becomes a finely balanced not to mention ridiculous race against time and the rolling pin. The blurb says 'never forget that a gallant visit can leave you powerless to fight the hedgehogs . . .''. Sound advice if you ask me.

Ken McMahon

Chickin Chase ''the first software I've seen with naughty bits''.

Graphics	★★★
Sound	★★
Toughness	★★★
Staying Power	★★★
Value	★★★

 Screen Scene Screen Scene



Chang searches the maze for the imprisoned Koong Shee.

Willow Pattern
Commodore 64/128
Firebird
Price: £3.95/cass

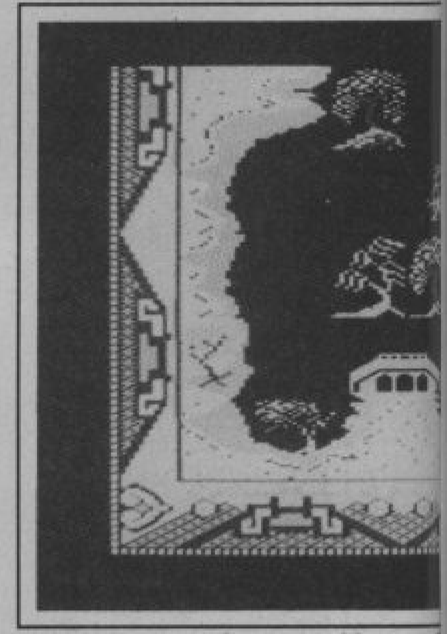
Well, I never thought I'd see the day. *Willow Pattern*, the game of the plate. The story so far. Our hero, Chang must make his way through the beautiful, but deadly oriental maze of the mandarin's palace to rescue the beautiful Princess Koong-Shee. The maze is indeed beautiful, pagodas, palaces, and sword-wielding samurai are all superbly depicted.

Before we get to the action I should perhaps explain why Chang wants to rescue Koong Shee and why shee is being held against her will in the palace. Perhaps she is the one who has to paint the patterns on all those horrible plates, in which case she deserves to be locked up.

In fact the princess is being forced into a marriage with the evil merchant Ta Jin, who probably has one of those long droopy moustaches that evil Chinese merchants always seem to be endowed with. As far as Koong Shee is concerned it's a case of no ta Jin, because she's in love with Chang and that's why he's out to rescue her.

It's a bit like a platform game without platforms. You simply walk, or rather, run around the many screens of the palace picking up useful items as you go. Number one useful item is a sword, which you can fling in the direction of the samurai guards. Not a very nice thing to do, but essential as it gives you access to other parts of the maze. Crossing rivers is a laugh too. You have to jump from stepping stone to stepping stone, at the same time avoiding the malicious giants on the bridge who takes a swipe at you with their enormous paws.

I haven't actually found the princess yet, so I can't tell you



Willow Pattern "Great graphics, good



Bug Blitz "not as good as it should be".

Bug Blitz
Commodore 64/128
Ariolasoft
Price: £9.95/disk
£7.95/cass

Bug Blitz is one of those games that, once played, turns out to be better than you expected, but is still not as good as it should be.

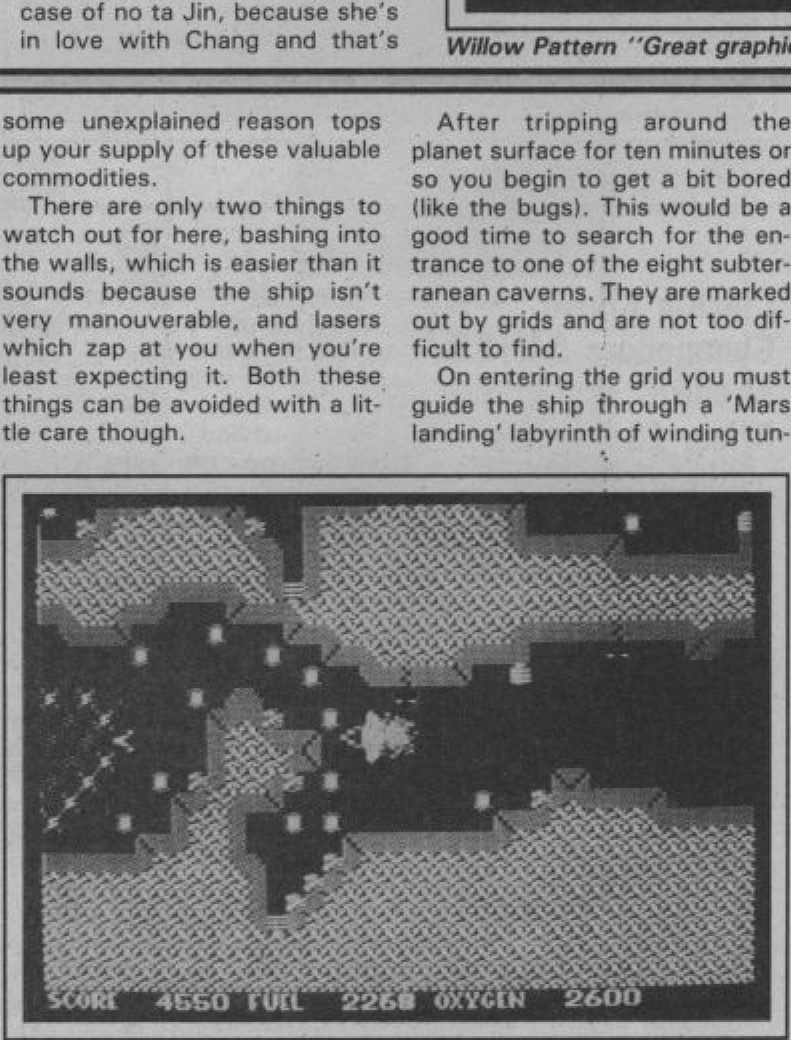
In your absence the planet has been infested by a swarm of mutant boring bugs, (boring as in digging holes that is). The fact that this has to be pointed out on the blurb says a lot about the game.

Bug Hunting begins on the planet surface. An aeriel map type display shows your ship, the planet surface, and various bits of debris. Shooting the debris earns you points, but the trick at this stage is to hit the fuel and oxygen cannisters. This, for some unexplained reason tops up your supply of these valuable commodities.

There are only two things to watch out for here, bashing into the walls, which is easier than it sounds because the ship isn't very manouverable, and lasers which zap at you when you're least expecting it. Both these things can be avoided with a little care though.

After tripping around the planet surface for ten minutes or so you begin to get a bit bored (like the bugs). This would be a good time to search for the entrance to one of the eight subterranean caverns. They are marked out by grids and are not too difficult to find.

On entering the grid you must guide the ship through a 'Mars landing' labyrinth of winding tun-



Bug Blitz "Could just as easily have been Rescue on Tharg.

whether it's worth all the chasing around. I understand that when you do find her and carry her off, her old man chases you out of the palace. Which is understandable when you look at it from his point of view.

A hard game to fault really. Great graphics, good oriental sound, and fun gameplay. No points for sexual equality though Firebird, and I still don't like those plates.

Ken McMahon

Graphics	★★★★★
Sound	★★★
Toughness	★★★
Staying Power	★★★★
Value	★★★★★



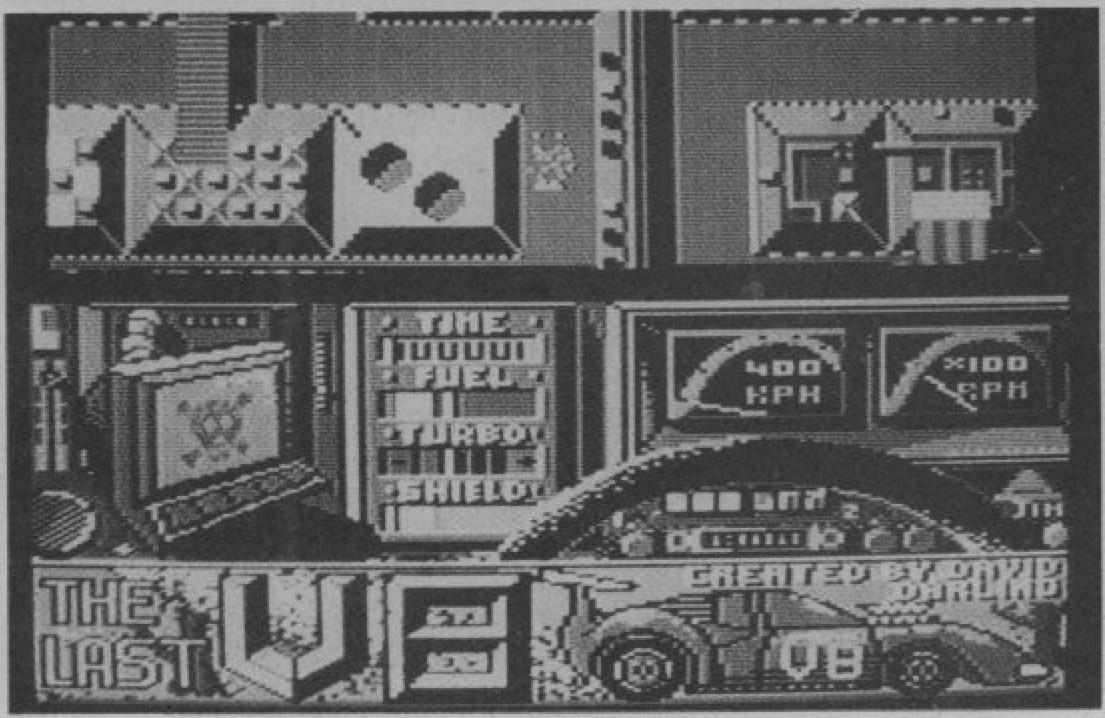
... good oriental sound".

nels. If and when you reach the bottom it's time to have a crack at the bugs with your proton blaster. The bugs, which incidentally, look nothing like bugs, even mutant ones, appear one at a time and dodge around the screen until you zap 'em a few times. Eventually you run out of oxygen and have to return to the planet surface the same way you arrived.

I'm going to slate this on two accounts. For a shoot 'em up it lacks any degree of excitement or urgency, which is to my mind the essential ingredient. But the most amazing thing is the game's total lack of identity. It's called Bug Blitz, but it could just as easily have been Rescue on Tharg or Attack Of The Mutant Finkoids. I wouldn't mind betting the authors wrote the game then thought up the title afterwards.

Ken McMahon

Graphics	★★
Sound	★
Toughness	★★
Staying Power	★
Value	★★



The Last V8 — only the top third of the screen is animated.

The Last V8
Commodore 64
M.A.D. Games
Price: £2.99/cass

"The Last V8" is a decidedly difficult game to play. It takes raw skill, dogged persistence, a certain knack for computer driving and lots and lots of practice. The blurb confirms last night's morbid dream. The world is under the debilitating sway of a nuclear winter. Tucked away in a radiation-proof shelter you while away the hours by cannibalising automobiles to produce a souped-up V8.

Now the time is ripe to venture above ground to seek out humans left on the surface (they would surely have mutated by now . . . but that's another computer game innit?). No sooner are you on the surface when a gruff, hoarse voice urges "V8, return to base immediately".

Before you can scoot the 4.5 kilometres to safety, a retarded nuclear bomb is virtually certain to cut short your journey with no possibility of the AA lending a hand. To be honest, I didn't get very far. I only drove through the countryside. Purely by courtesy of demo-mode did I get to hear more soft speech and see inside the bunker, still leaving the base totally unexplored. In fact my only view of "home" was the squinny pictures on the insert.

The screen is split into three horizontal sections. The top part shows an aerial view of the road which scrolls as you drive. Sandwiched in the middle are all the instruments you'd expect to find (including a distance to base readout) while the bottom sector is devoted to mere decoration. Left and right increases/decreases your speed . . . gear changing is automatic; up turns you right and down steers left.

The Last V8 is not for beginners. The car is tiny and it can move very fast. This means that the bends that appear as the screen scrolls are very difficult to take.

This is not necessarily a bad thing as this type of game has to be tough to be interesting. What is annoying though is that every time you crash it takes a good few seconds, an annoying jingle, and a couple of other unnecessary frills before you go right back to the beginning again.

M.A.D. games is supposed to be Mastertronics slightly dearer, slightly better, new range of games.

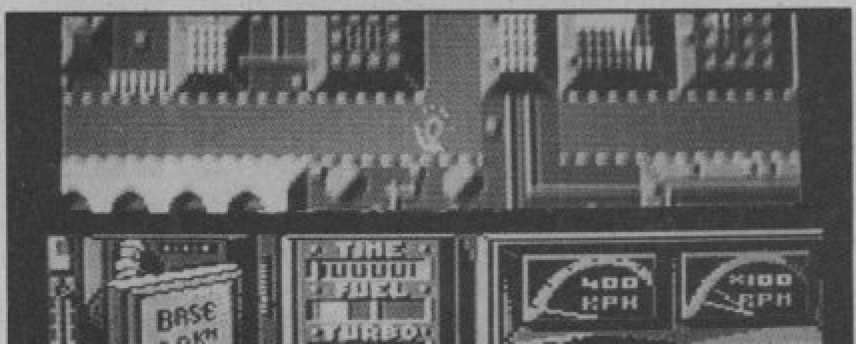
I can't really see the improvement in quality — many of the £1.99 jobs are just as good, if not better, than the Last V8.

For my money you would be much better off scrounging another fiver from somewhere and buying a really decent game rather than this really average one.

Laurie Sampson

Graphics	★★★
Sound	★★★
Toughness	★★★★
Staying Power	★★
Value	★★

The Last V8 has just crashed and turned into a ball of flames.



Superman
Commodore 64/128
Beyond
Price: £9.95/cass

When you think of Superman what do you think of?

Bet you think of the Man of Steel flying over Metropolis with that dead pretty American actress tucked under his arm.

Most people do I suppose. If they don't think of that they picture him catching that chopper before it hits the ground killing all inside in Superman I, or of the plane caught in an electric storm that he rescues in Superman II.

Daring rescue bids are what the film makers have taught us to expect from Superman. The original DC comics had all sorts of different ideas. Ideas about good and bad. Ideas about super villains as well as super heroes.

The comic ideas were good. So good in fact that they will outlive the films if the latest rumours from Hollywood can be believed that no more Superman movies are planned.

Nothing odd about this. Most Superman fans will tell you that they prefer the comics to the films.

The game makers have emphasised Superman's latest comic foe, Darkseid, but also include a large element of film-style rescue bids.

The difficult question for games based on films, books, comics, or whatever, is how well they reproduce the original excitement.

And, as far as Superman is concerned, I don't think much of that original excitement comes through.

Sure, there are rescue bids, but these involve a decidedly tedious business of landing on tiny humanoids with your moth-like Man of Steel, pressing the fire button twice, and carting them off to safety.

Then there are the main elements taken from the comics. In particular Superman's heat vision. Instead of the sweeping arcs of red flowing from Superman's eyes you just get these puny straight lines that worm their way around mazes, Pacman-fashion, in an attempt to stab Darkseid.

You can play either Superman or Darkseid but it doesn't really make much difference. The game is the same whoever you are.



Superman shoots a beam of heat vision towards Darkseid in one of the rescue screens.

I found this part of the game boring. I kept thinking, oh no, not again — each time one of the maze screens appeared.

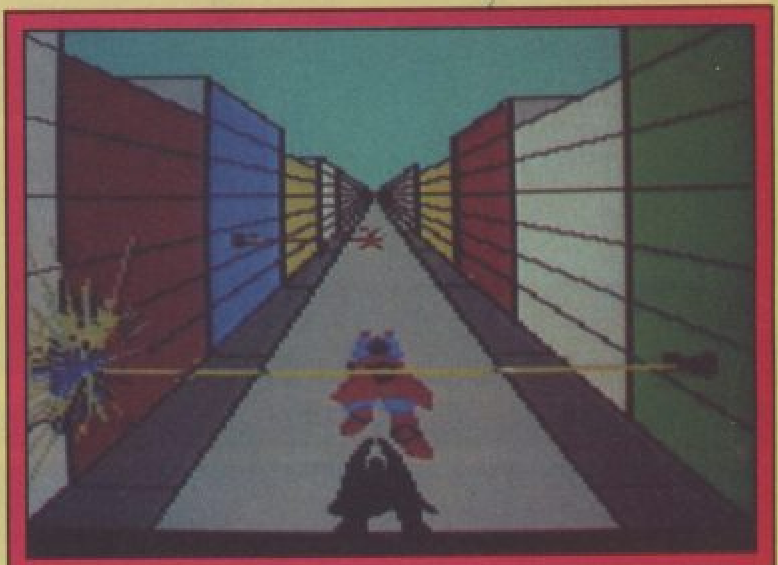
The combat screens are much better. Superman is slightly larger in these screens and you can actually see his cape fluttering in the wind as he flies.

In one of the combat screens you get to use the super breath to blow back a barrage of fire balls toward Darkseid's 8 barrelled cannon.

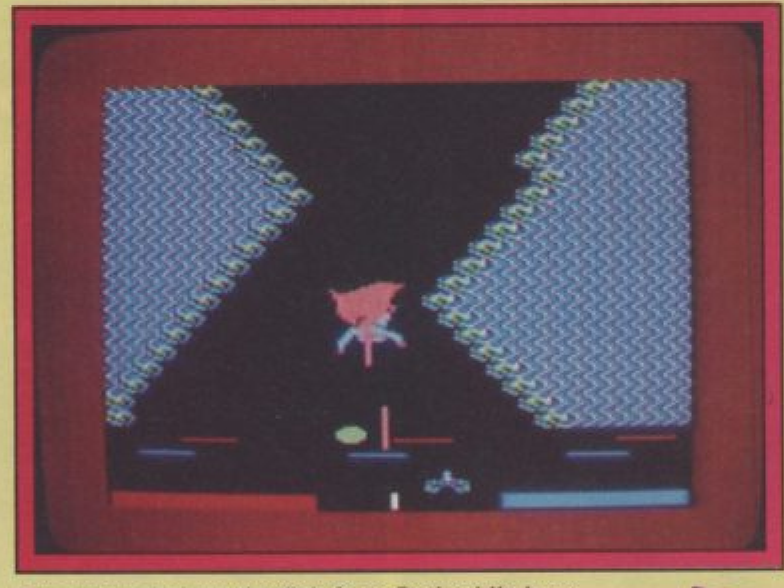
Another of the combat screens is a chase game where you are pursued along an underground cave by Darkseid who is attempting to shoot you up with his deadly Omega Ray. Your only defence is to trigger the weapons on the walls of the cave. This scene annoyed me intensely. I hated to see the Man of Steel running away from a fight. I wanted him to turn around and sock Darkseid in the jaw but the software wouldn't let him.

There is one graphically impressive screen where Superman is flying through a tunnel — dodging Darkseid's remote lasers. I was just getting into this screen when STOP. It finished — and I was back to more silly red and green lines.

This staccato effect spoils any slim chance that Superman might have had of being an enjoyable game to play.



The combat screens provide welcome relief from the tedious business of chasing Darkseid around the streets.



Superman dodges the flak from Darkseid's laser base in this combat screen. Blue bar chart is Darkseid's energy — and the red one is Superman's.



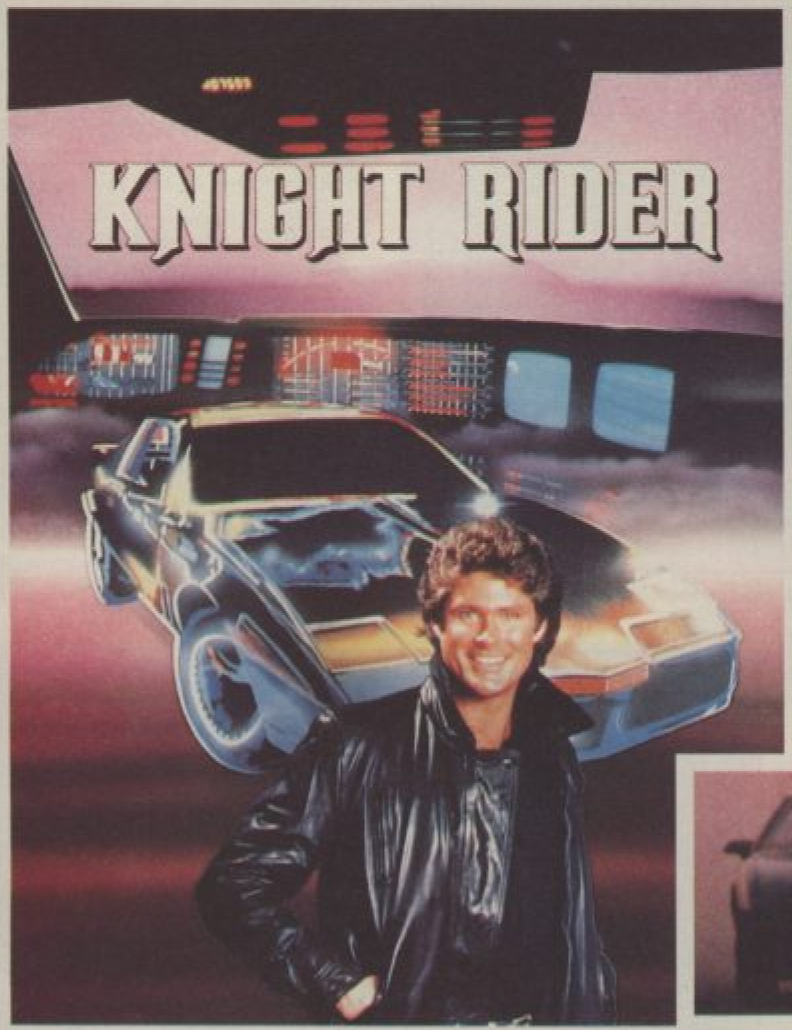
The man of steel smiles for the 64. Someone should have told him a good title screen is no substitute for a good game.

Disappointment has to be the only verdict on Superman. According to the game blurb it is the first of the "Super Power Collection". We can only hope the sequels will be better. It has also been billed as Beyond's premier title of 1985 which is a bigger shame because the game itself isn't half as good as Quake Minus 1, Nexus, Shadowfire, and Enigmaforce.

Eugene Lacey

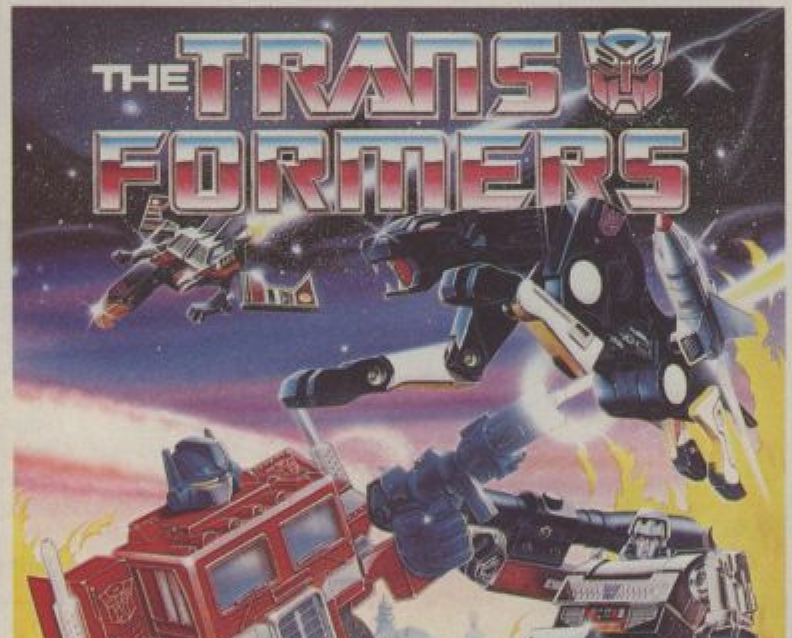
Graphics	★★
Sound	★
Toughness	★★★
Staying Power	★★
Value	★

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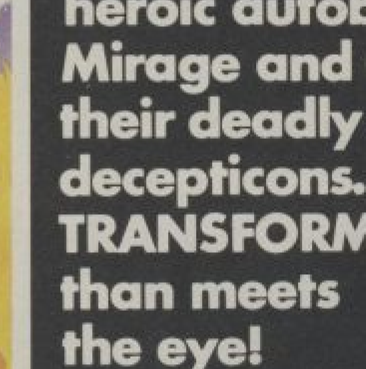




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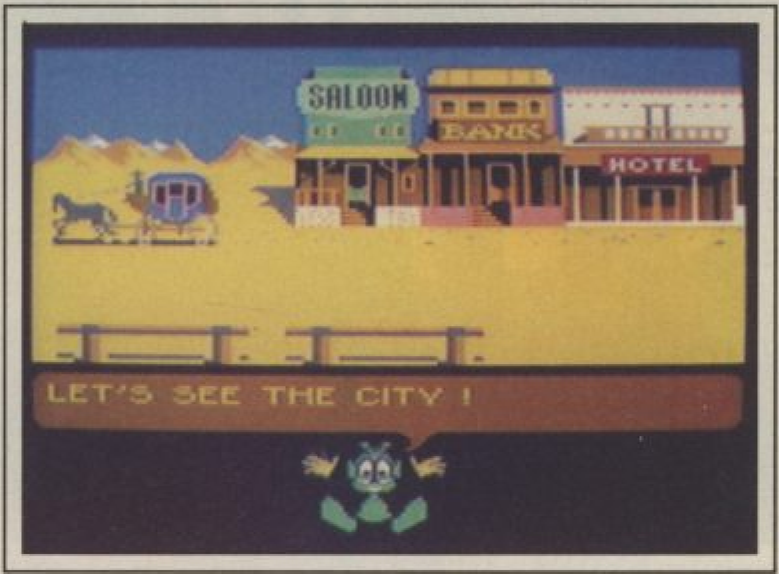


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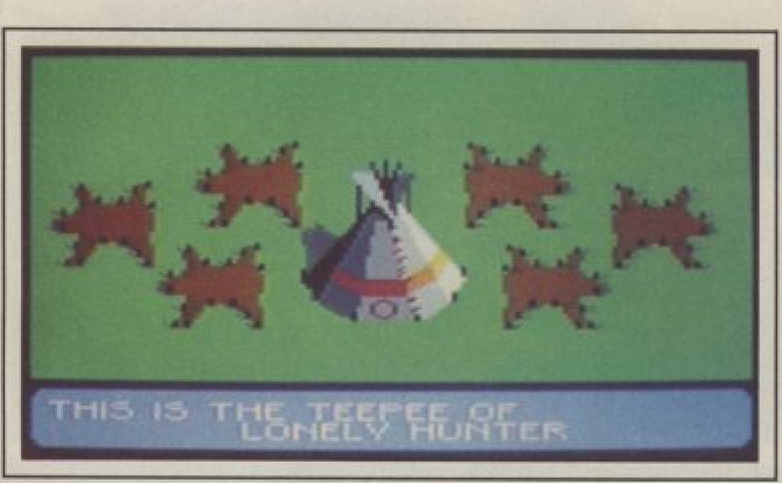
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You must get the Golden Nugget to pay your stage coach fare into town. Watch out for bandits though.



Wild West
Commodore 64/128
Ariolasoft
Price: £9.95/cass £12.95/disk

Wild West adventure time boys and girls. Big Nose Bill and his gang have captured Fort Snake. You gotta round up a posse and recapture it from the dirty low down no good double dealin' . . .

The best part of this game is the opening sequence. The three little sprites who appear throughout sing a little song — real purtty.

The novel thing about *Wild West* is that it's joystick controlled, you very rarely have to actually type anything. There are these three sprites, you see which for some reason look more like little Martians than inhabitants of Greedy Gulch. Anyway, each one of them offers suggestions as to what

Friday the 13th
Commodore 64/128
Domark
Price: £14.95/disk £9.95/cass

I don't know what it is about games based on horror films but I haven't seen a really good one yet. Maybe there is a curse on all programmers who attempt to turn the bread and butter of the film makers into lucrative games software. Whatever it is, this latest attempt to break the curse from Domark doesn't make it.

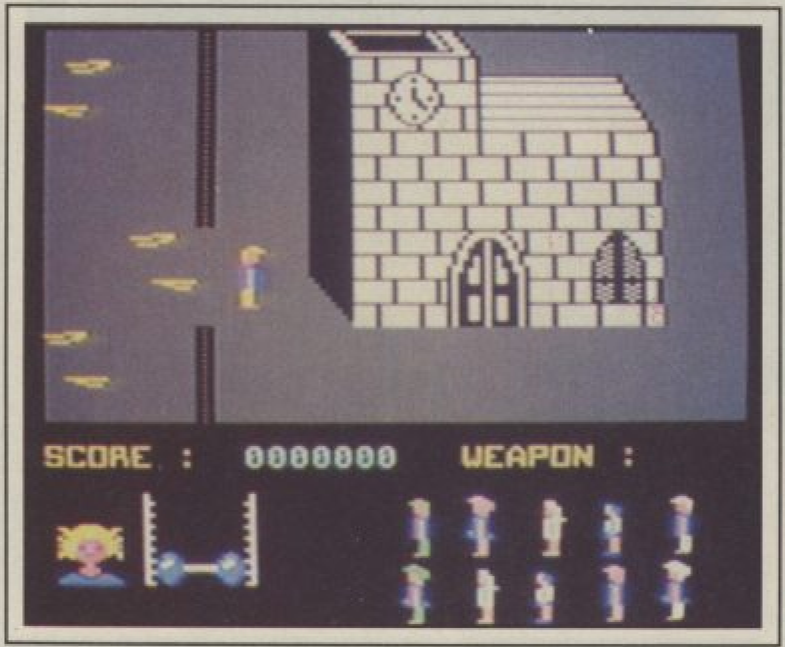
Friday the 13th tries to stick as closely as possible to the plot of the film. For those of you who haven't seen it , it goes like this. The ghost of Jason, a teenage camper who was left to drown by his 'friends', rises from the dead to reap a grizzly revenge on the holiday makers of Crystal Lake.

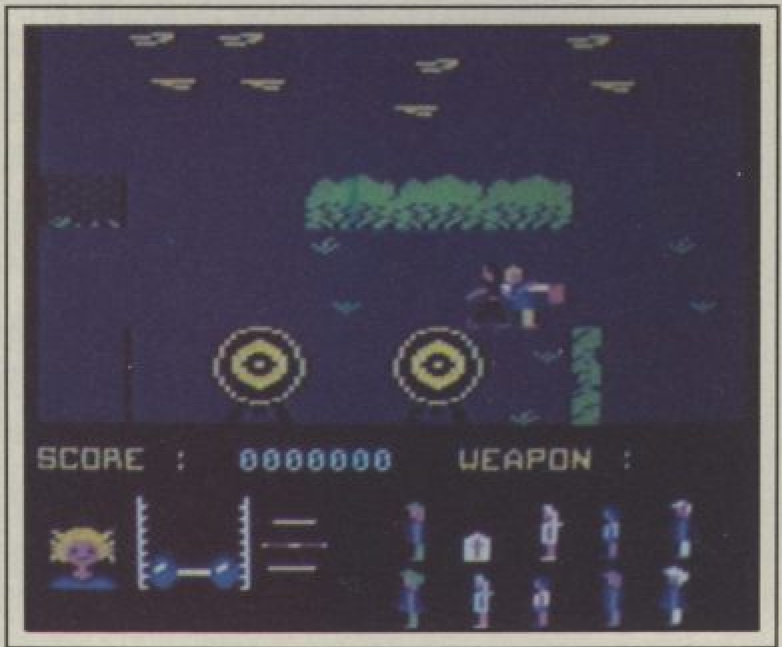
The aim of the game is to rescue as many of these hapless campers as possible and kill Jason before he kills you.

To do this, you have to find the Sanctuary Cross and take it to one of the buildings (there is a barn, a church and a house) then find the nine campers and tell them to go back to that building.

Once you have rescued the campers you set out to find and

Find the Sanctuary and hide it in the church to protect the campers.





Jason swings the axe, cleaving his victim's head.

course of action you should take at each stage in the game. Only one of them is giving the right advice, the question is which one?

The game is in three sections each of which loads separately from the disc or tape. If you've completed or part finished one section you are given a password. This is typed in when the next section has loaded and indicates how far you got with the last bit, what items you collected etc.

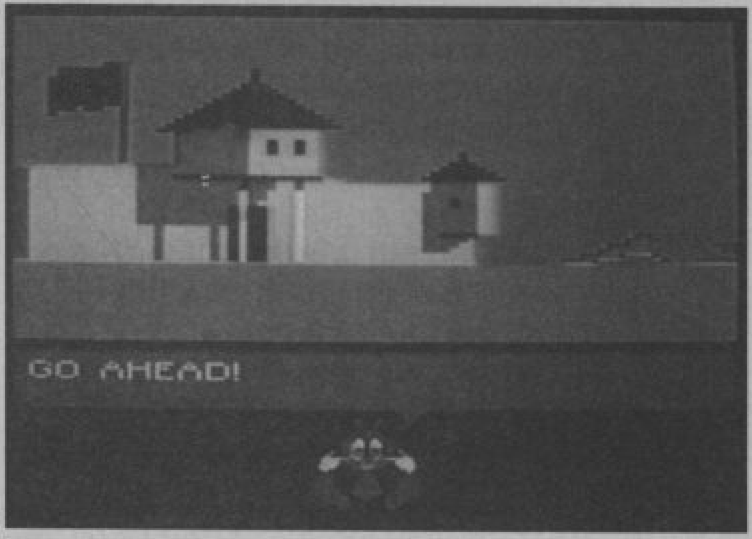
It's almost impossible to get a good idea of an adventure after only a few hours play but I'd say Wild West should provide a averagely tough test. Quite surprsing as there are only three options to follow at each stage. Given that there are three parts and each takes about two and a half minutes to load from disk there must be a great many more locations than I got a look at.

Graphics are pretty good, some screens incorporate animation, look out for the cattle drive which is good fun.

Ken McMahon

Graphics	★★★★
Sound	★★★
Toughness	★★★
Staying Power	★★★★
Value	★★★

Don't "go in" unless you are quick on the draw.



kill Jason himself. And in true horror film fashion, Jason has conveniently left several knives, axes, and chain-saws lying around the place for the purpose. The best weapons are the ones that can be thrown; knives and axes. You don't have to get too close to him with these weapons and can score enough direct hits to kill him.

If you do get into a tangle with him it is almost impossible to get away and you have to witness the highly unsavoury sight of Jason wiedling his axe until the 64 emits a blood curdling scream, you fall dead, and this message comes up on screen. "Oh dear . . . you seem to have had your head cleeved what a shame . . . ha, ha, ha".

Talking of that scream, it really is spine-chilling, the best part of the game. The first time I heard it was in the office after everyone had gone home. I nearly fell off my seat. I had to reach for the volume control. It does get a bit annoying after a while though — but boy, is it effective.

It is a pity the other sound effects weren't as good. The footsteps as the charters move sound like a clock tick tocking too quickly and too loudly.

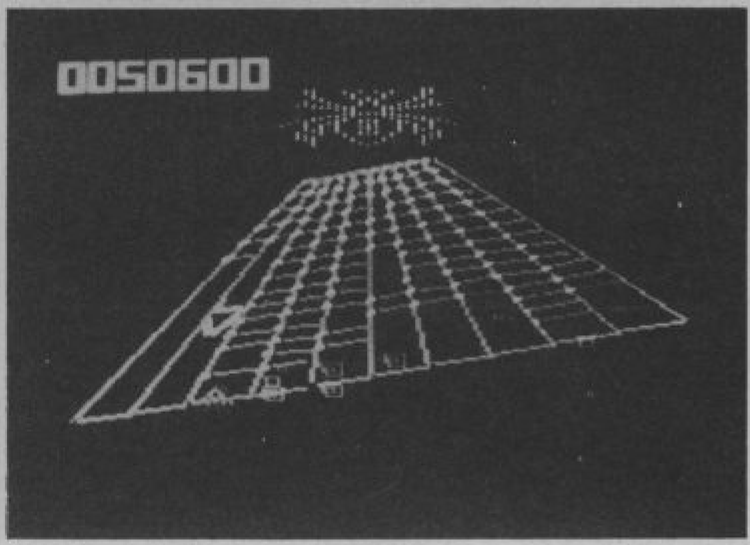
The animation is also pretty average, as are the graphics. There is a good tractor in one of the screens but even this is let down by the fact that it doesn't move.

Already the newspapers have sniffed a controversial story in Friday 13th with the Times reporting that John Menzies stores had asked Domark to provide less horrific packaging for the game, and that the film was an X-rated movie for over 18's only. Apart from the fact that a large number of under 18's will have seen the film at the cinema or on video anyway, all this talk misses the most important point about the game — That It's Not Very Good.

No more than an average to poor arcade adventure. Were it not called Friday the 13th, and were it published by Mastertronic instead of Domark, then I would probably grudgingly admit that it was just about worth two quid. But at a tenner, forget it.

Eugene Lacey

Graphics	★★
Sound	★★★
Toughness	★
Staying Power	★
Value	★



Shoot out all the insects on the grid.

Axis Assassin
Commodore 64/128
Ariolasoft
Price: £9.95/disk £7.95/cass

You can learn a lot about this game from the title screen — it's copyright 1983. It baffles me how Ariolasoft think such dated US merchandise can still hope to compete today.

Imagine a series of differently-contoured grids, narrowing at the top of the screen in a (poor) attempt at a 3D effect. Racing up and down each grid are a range of poorly drawn creatures: 'xterminators', 'mutant guards', 'kamikaze hunters' and the like. While at the top perches a big fat spider, the 'master arachnid'.

The idea is that you are caught in this spider's web and must blast your way out by zapping everything that moves. Unlike Tempest you're able to move up and down the grid, as well as around the top. If you succeed in shooting enough creatures, there are more than 100 other webs for you to die of boredom in.

For me the only interesting part of the game comes at the end of each grid when, if you hit a smartbomb key at the right moment, you get transported to 'the Nest' where you have the chance to earn yourself an extra life. In a time period of about 15 seconds you have to destroy a number of aliens, shoot through a box and link up with a captured ally.

This requires fast, precise action and is satisfying when achieved. The same can't be said of the rest of the game, which although certainly fast, is devoid of intelligent content.

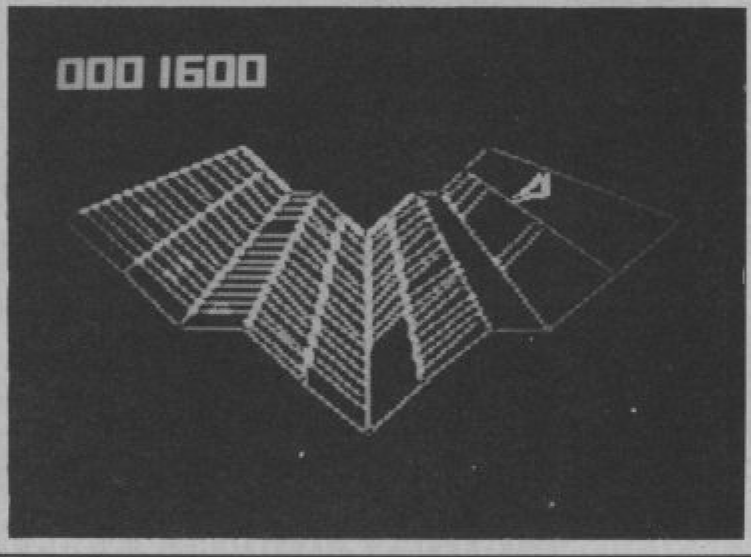
The graphics, apart from the grids, consist simply of small, non-animated creatures drawn in outline only, moving very rapidly up and down the grids. Sound is made up of the usual blasting noises. There's no music.

The game may have limited sentimental value to the small band of Tempest cultists, but for the rest of us there's little of interest.

Chris Anderson

Graphics	★
Sound	★
Toughness	★★
Staying Power	★
Value	★

Watch out for grid folding up.

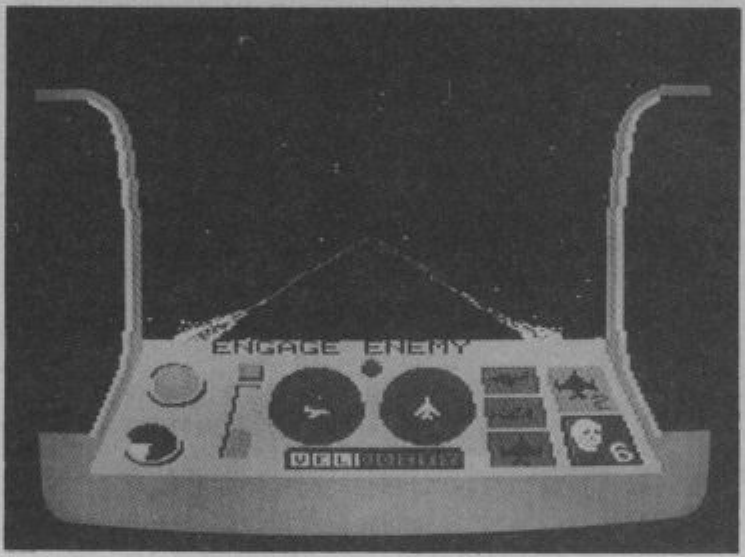


Starion
Commodore 64
Melbourne House
Price: £9.95/cass

Any attempt at putting Starion under the microscope is bound to invite comparison with Elite, so I might as well get it over with now. Starion's deep space strategy bears many similarities to Elite's, but without the trading aspect or the smooth graphics.

As 'Starion', fresh out of Space Academy in the year 2010, you are chosen to pilot the world's first timeship. Your task is to visit each of the 81 time zones collecting the cargo from alien ships you have blown up. The cargo from each destroyed ship is re-constituted to form a giant letter floating in space. When all the letters in a zone are collected, re-arrange them to find out what the cargo was, and deliver them to a planet before proceeding to the next time zone.

Your rating changes from 'Novice' as you proceed, eventually reaching 'Supreme Commander'. If and when you reach 'event zero' before the beginning of time (event one), then you



A good game for the failed Elitist



become the earliest thing to exist and must, by default, assume the title of 'creator' of all that follows.

As a 'Dangerous' Elite player (*'Big 'ead'.* Ed) I found *Starion* a very poor second to the Firebird game.

The screen displays of front view, scanners and instruments failed to impress me, as did the alien spacecraft themselves. The graphics are pathetically slow and jerky, the plot has overtones of Monty Python and as for the music, grate — doesn't it!

I am not saying that *Starion* doesn't have its strengths. Its just that *Elite* has now set the standard for these type of deep space, adventure shoot 'em ups, and anything new that isn't as good just doesn't stand a chance.

What I really want is something that is better than *Elite*. But I can't help thinking that I am going to have to wait for Braben and Bell to finish *Elite II* to get it.

Fred Reid

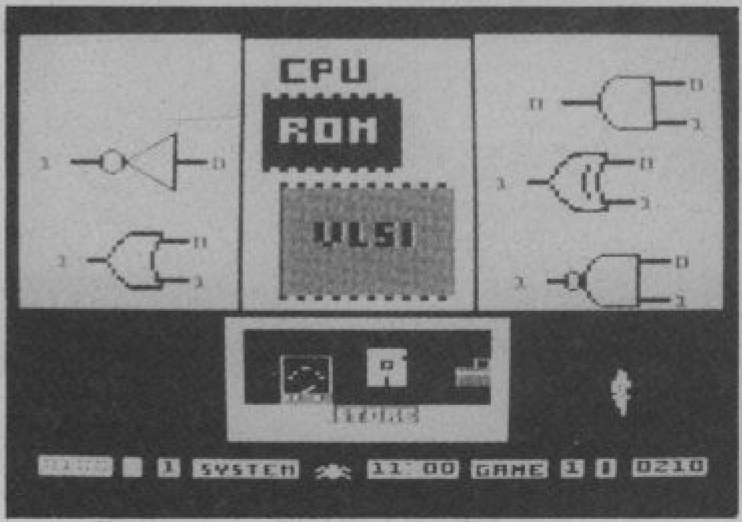
Graphics	★★
Sound	★
Toughness	★★★★
Staying Power	★★
Value	★★

D-Bug
Commodore 64/128
Ariolasoft
Price: £9.95/disk £7.95/cass

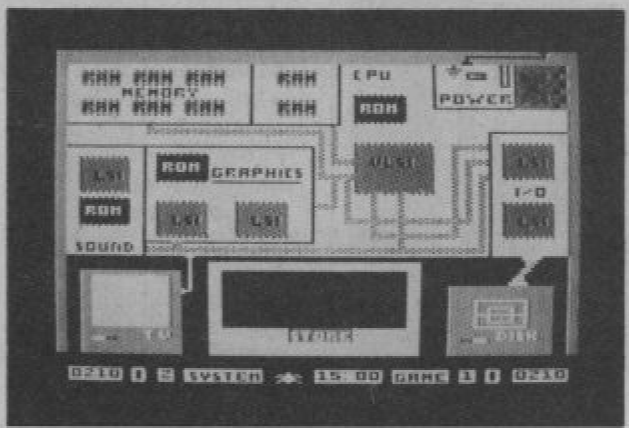
D-Bug is an 'educational' game. The idea behind it runs, I think, something like this. If you let your kid sit down with his Commodore 64 and play games morning noon and night you'll end up with an ace games player with all the intelligence of an artichoke. But, if you buy this game they can have fun and learn at the same time.

I'm always suspicious of people who try to make out that their games are good for you — the All Bran syndrome (i.e. the only way we'll get people to buy this is if we convince them it's good for them).

This is how it works. The game part of D-Bug is called Gotcha! There are thirty or so symbols on the screen, half are boats, half butterfiles. You and your opponent, or the computer take turns to capture the symbols, you go for the butterflies, your opponent the boats. Each player captures a piece by moving a cursor over it, but the cursor can only move one



Does the inside of a Commodore 64 look like this?



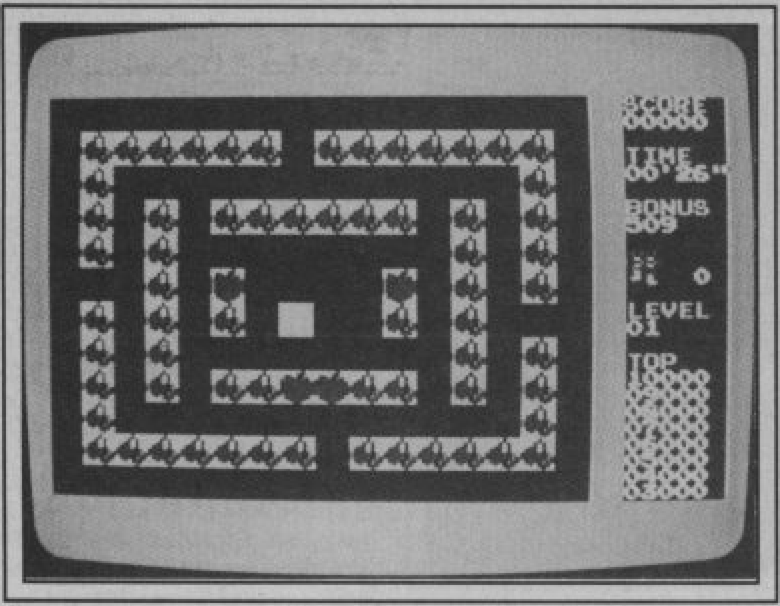
square in any direction. The idea is to force your opponent to capture your pieces — for which you get points. Great fun huh? Gotcha has all the excitement and tactical challenge of noughts and crosses with the added bonus that you don't need a pencil and paper.

But wait, there's more! To make it doubly exciting when you've been playing for about five minutes the 'computer' breaks down. You must then go inside the computer and trace the bug. This could be anything from an overheating RAM chip to a loose power cable. On the lower levels you are given clues as to where the fault lies, but later on you have to work it out for yourself. When the fault is rectified you can go back to playing the boring game until it breaks down again.

I didn't find D-bug any fun and I didn't learn anything either. If I was feeling a bit more charitable I might say young child could get something out of it.

Ken McMahon

Graphics	★★
Sound	★★
Toughness	★★
Staying Power	★
Value	★★



A very fruity maze game from Mastertronic.

Tutti Frutti
Commodore 16
Mastertronic
Price: £1.99/cass

Why, why, why, can nobody ever get it right? How many times have you bought a game that told you to use a joystick in port two when it should be in port one? Mastertronic have surpassed themselves this time. Joystick in port 0 it says. Perhaps I'm nit picking (*you're nit picking — Ed.*), but is it too much to ask for correct instructions?

Fortunately that's about the only thing wrong with this game. It's not the most original game I've ever seen — it reminds me of about four or five others all mixed together, but it is very well done.

You are Super Strawberry. It's getting round to the time of year for picking cherries and, as everybody knows, cherry picking is the kind of job strawberries were born for. Out to stop you, for reasons best known to themselves are the Acid Apple Gang.

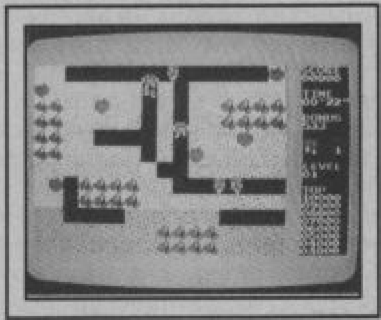
Tutti Frutti is a bit like a cross between Pacman and Jack Attack. On the opening level it's simply a case of munching, sorry, picking the cherries as fast as you can without getting caught by the rotten apples. If things get tough you can drop strawberries on their heads by munching the maze immediately underneath them (the strawberries that is, life gets confusing with all this fruit around.)

On level 2 you have to munch the maze walls as well as the cherries. The walls look like they're made from strawberry jam so this shouldn't prove too unpleasant. Level 3 has you squashing the bad apples by pushing blocks off the wall. From there on up it's variations on the same fruity theme.

As I said, not the most original game in the world, but good fun all the same. As well as good, clean graphics, the author's managed to squeeze a respectable tune out of the C16's TED chip. Definitely worth buying if you missed out on a munch man derivative last Christmas.

Ken McMahon

Graphics	★★★
Sound	★★★★
Toughness	★★★
Staying Power	★★★
Value	★★★★



Death Race 16
Commodore 64
Atlantis
Price: £2.99/cass

It doesn't take a brain surgeon to work out that *Death Race 16* is a racing simulation. Probably the most brill and best known race game ever is Atari's Pole Position and consequently it's the standard by which everything else is compared. Surprisingly enough, Death Race 16 doesn't come out too badly.

You start off, as is usual in motor racing, on the grid. The problem is your car has stalled and everyone else has left you behind in a cloud of smoke and gravel. You must come from behind, and overtake everything on the road at speeds of up to 300 mph. You don't have to go that fast, but if you didn't then you wouldn't get many points and the spectators would think you weren't much cop as a racing driver. You'd never be able to look yourself in the wingmirror again.

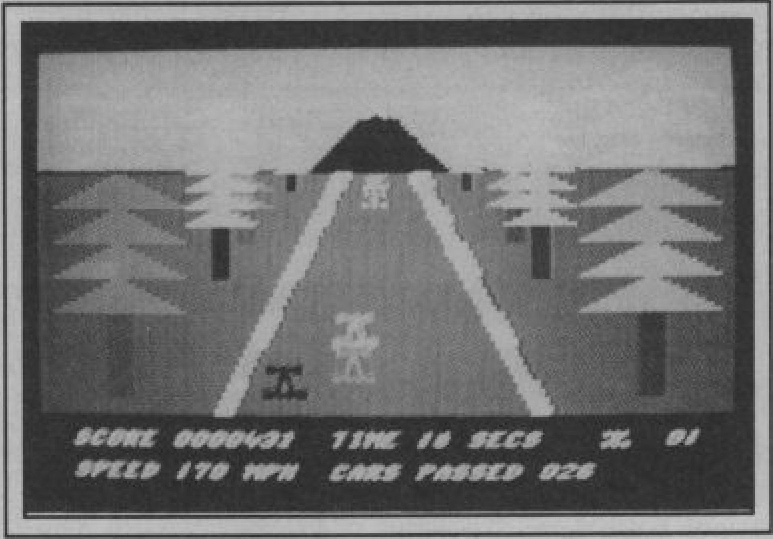
Now, a number of criticisms. You have to push the spacebar to start each new game which is a bit of a pain if you're using a joystick, a minor point, I know, but one which could easily have been put right. Next, the action is a bit jumpy, not really smooth flowing enough. Given the hardware limitations this is inevitable, but it's murder on your eyes particularly at the skyscraper stage.

Probably part of the same problem is the other cars on the road. There is no real illusion of gaining on them, then overtaking them at speed. It's more like they approach you, space invaders fashion from the top of the screen. They're also very difficult to avoid as you don't know which way they're going until they've smashed right into you.

Don't be put off by all this though. My overall impression is that Death Race is a pretty good simulation, the various track sections, city streets, mountain roads, night driving, are superbly done. Certainly the best game of its kind for the C16. In fact, the only one, I think.

Ken McMahon

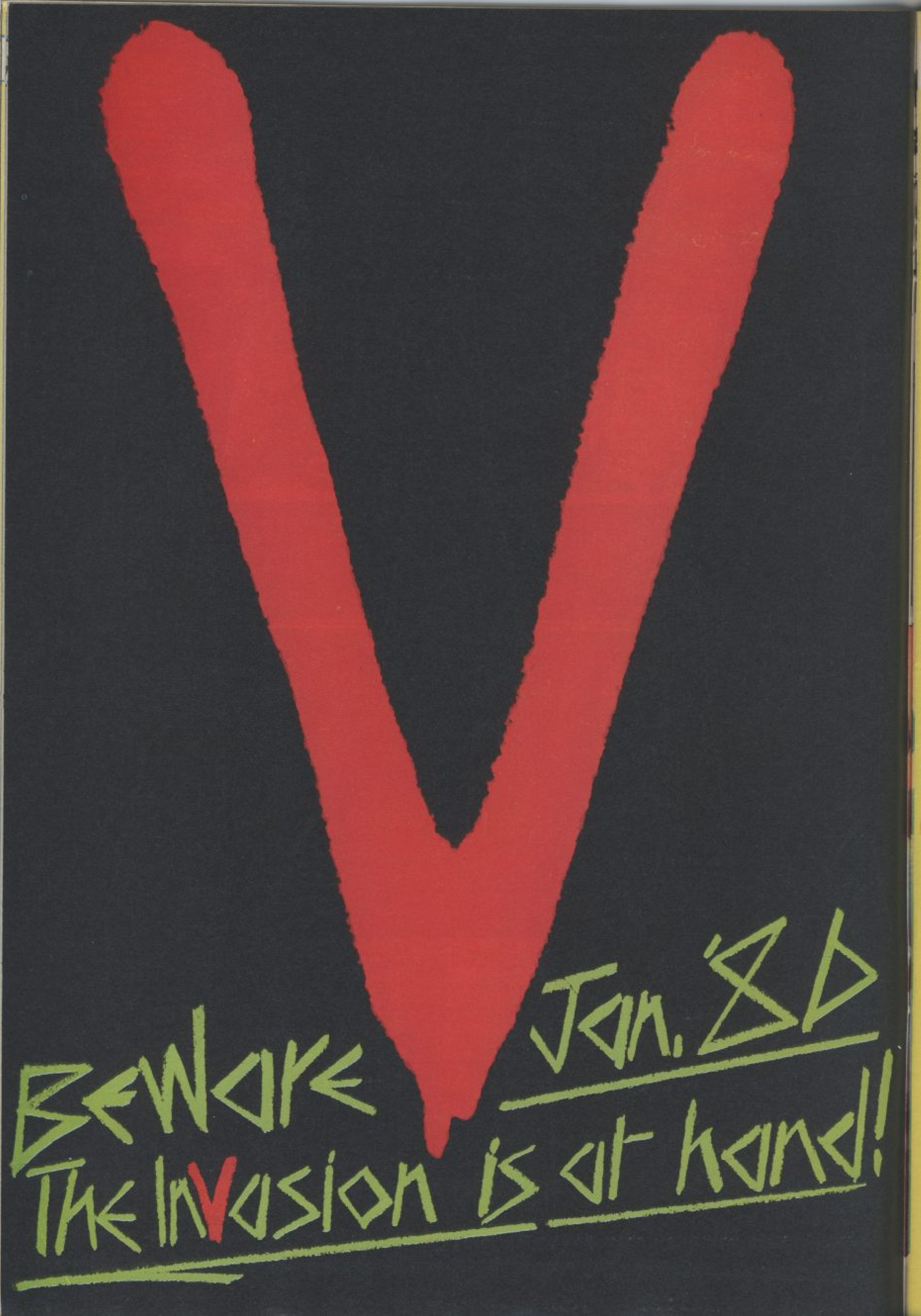
Graphics	★★★★★
Sound	★★★
Toughness	★★★
Staying Power	★★★
Value	★★★★



Death Race takes you through ever-changing landscapes.

Compares very well to the super duper 64 offerings.




V
Beware
Jan. '86
The InVasion is at hand!



Retake the Falklands in PSS's latest war simulation.

Falklands '82
Commodore 64/128
PSS
Price: £7.95/cass

Falklands '82 is a deceptively simple yet classic example of how computer wargames should be presented. If you're looking for hundreds of regiments, intricate supply and combat rules then it is not the game for you, but from the point of view of plain fun we found it entertaining.

The screen shows a representation of the Falkland Islands -well, just the main one. Superimposed on this are Argentinian and British units. None of those complex and frustrating unit symbols for PSS: if it's an infantry unit, the screen shows a stylised soldier. If it's a tank, then you get a tank and if it's artillery, guess what? Right: a cannon.

The player takes the part of the British forces and the first decision he must make is where to land his troops. Once committed, the British forces must land at that spot. The computer plays the Argentinians (perhaps on the premise that no-one would want to be on the losing side anyway). Maybe that sounds a bit jingoistic. The outcome of the battle for the Malvinas/Falklands is now a historical fact, and as far as the game goes, this is an accurate presentation.

Movement on the board is unit by unit, and each one has a choice of Move, Attack or Pass. If a unit moves, then it cannot attack that turn. Weather conditions are also taken into consideration, as is terrain, and if the weather is favourable, there are optional airstrikes and naval bombardment of enemy forces.

When the game begins, no Argentinian forces are displayed, and the only way the player can detect them is by having one of the SAS or SBS units reconnoitre an area.

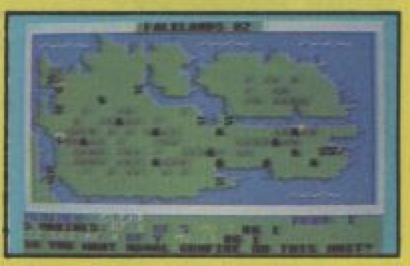
The computer takes care of combat; all the player needs to do is designate which unit he will attack and take into account their relative strengths (displayed handily at the bottom of the screen).

Drawbacks: It is possibly a little easy for the British to win. There are five skill levels, ranging from Beginner to Masochist, but careful play should allow the experienced wargamer to win easily at any level. Also, the level of replayability is limited.

Overall: It's cheap, it's fun, it's (possibly) controversial, and you'll enjoy playing it at least once.

Simon Farrell & Jon Sutherland

Graphics	★★
Sound	★
Toughness	★★
Staying Power	★★★
Value	★★



Strengths of S.A.S. units displayed at bottom of map.

Yak's Progress
Commodore 64/128
Llamasoft
Price: £11.95/disk £9.45/cass

Jeff Minter — or Yak as he sometimes likes to call himself — is not someone you can be indifferent about. For ages he was THE programmer of Commodore machines in Britain, but recently he's come under savage attack in certain quarters. Whether you're for him or agin him, you can't ignore the fact that he's made an important contribution in developing the art of the computer game.

The modestly titled *Yak's Progress* is a compilation of Minter's eight most famous games.

They start with *Attack of the Mutant Camels*, a scrolling shoot-em-up which, as Jeff admits in his enjoyable introduction to the compilation, looks pretty rudimentary by today's standards. 'I didn't even know where the scroll registers were!' The ideas weren't particularly original either, but the fast and furious zapping attracted considerable enthusiasm at the time.

The same could be said about two grid shoot-em-ups *Matrix* and *Lazer Zone* — primitive looking, but fast, demanding, noisy and frenetic. The type of game that shattered parents illusions about the educational value of the computer they'd purchased.

These illusions were only slightly restored by the release of *Hovver Bovver*, a game which actually featured MUSIC and REAL-LIFE SCENARIO. Well, if you can call mowing a lawn with a borrowed mower, while being chased by a neighbour, a gardener and your dog real life.

My own favourite is *Revenge of the Mutant Camels*, the game which I would guess sold in the greatest numbers. This caused something of a sensation on its release almost exactly two years ago. Not only was there a superb smooth-scrolling background, an unheard of number of different attack waves (42), and some pretty cool music, this was also the first British game to feature a fast-loader!

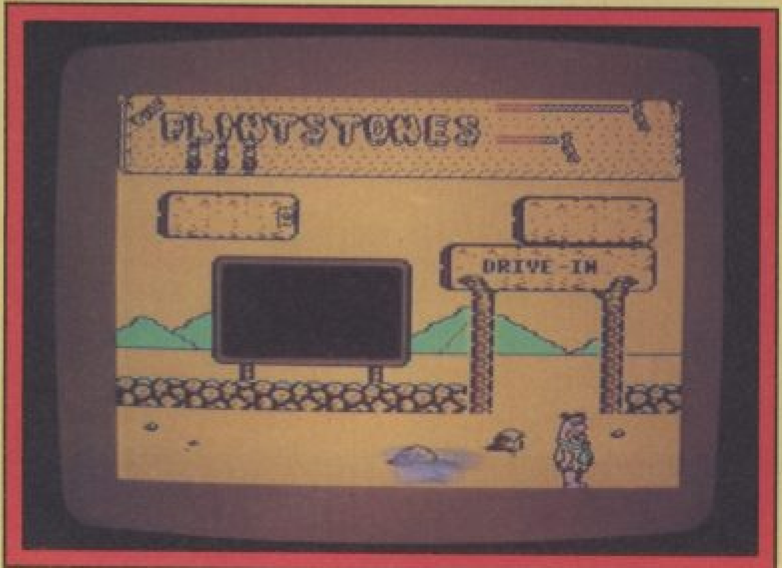
The rest of the compilation (which comes on two tapes, two games to a side), gets increasingly animal dominated. There's *Sheep in Space*, and *Ancipital*, the bizarre multi-loation game starring a half-man, half-goat.

Compared to today's all-singing, all-dancing, ultra-slick US productions, Minter's games look pretty raw, but this collection at least offers newcomers to the 64 a cheap way of experiencing the work of one of the industry's great personalities.



Chris Anderson

Graphics	★★★
Sound	★★★
Toughness	★★★★★
Staying Power	★★★★
Value	★★★★



Fred down at the Drive-in. No sign of Wilma though.



Fred could do with losing a few inches off that gut if he's going to avoid the tortoise.

Yabba Dabba Doo
Commodore 64/128
Argus
Price: £7.95

Some of you out there may remember the Flintstones, most I would hope. But if you don't then I'll remind you. They were the 'modern stoneage family' of the classic Hanna Barbara cartoons, whose lives where clusttered with prehistoric gadgets and customs which bore more than a passing resemblance to Twentieth Century American life.

You may also remember me raving about the US Gold import *Grog's Revenge* earlier this year. The animation was the best I've seen on the 64 — ever. It's failing was somewhere in the gameplay and the same is applicable to this Taskset-developed Flinstones game. The animation and spirit is true to the original, but you're not required to do anything more than in any other run-of-the-mill game.

Yabba Dabba Doo is basically a picking-up-objects style game. You control Fred and work your way around the screens collecting rocks to build a house and other buildings in Bedrock. You'll also need some money to hire out Dino (the pet dinosaur) because you'll have to climb on him when you get to the bits you can't reach. Nasties maraude the screens in the shape of pterodactyls dropping rocks on Fred's head and a boulder that knocks him clean off his feet. As with these kind of games it rests for its appeal on your desire to overcome a challenge.

When you compare the graphics of the game with the quality of its play the discrepancy is disappointing. Taskset say there's more of these to come, so I hope they rethink their approach before they go and release the next one. Cartoon games could be the next big thing on the 64 — Elite's *Scooby Doo* may point the way when it's released next year, but until someone can provide some serious interactive gameplay along the lines of *Spy vs Spy* these games will always disappoint. I'm looking forward to seeing it done properly.

Mike Pattenden

Graphics	★★★★
Sound	★★★
Toughness	★★★
Staying Power	★★★
Value	★★★



Nothing in the mirrors, but that's because he's just gone through on the inside.

Revs
Commodore 64/128
Firebird
Price: £14.95 cass/ £17.95 disk

Don't be fooled into thinking this is just another racing game, because it isn't. *Revs* claims to be a simulator for a Formula Grand Prix racing car and it does much to back this claim up.

The screen is the closest thing I have seen to give you an actual idea of what a racing car is like. If you've ever sat in one then you'll know that your backside is slung six inches or so off the ground and your viewpoint is low, obscured by the wheel and the wing mirrors. Instruments are all painstakingly correct, your rev counter dominating the centre of the dash. No silly speedometer on the top of the screen — this package takes itself very seriously. But what's it like to drive?

Well I must warn you that unless you've got an anologue joystick or one of the old paddles then you're going to be crouched over the 64 with fingers spread over the keyboard. This game won't accept the usual digital joystick. This seems to undermine the reality of the simulation. You don't turn a car left and right using a couple of keys do you? At least with a stick you get that impression of movement and banking.

Revs could be the best driving game yet, but it isn't. *Pole Position* and *Pit Stop II* are more playable if less realistic, and that's what matters. The graphics in *Revs* are well defined and the sound noisy and engine-like. Firebird told me there wasn't enough memory available to make it work with a digital joystick. I'd suggest they think again and make the courses less exact or, better still, drop one altogether. It's a bit of a case of not seeing the wood for the engine transmission.

Mike Pattenden

Graphics	★★★★
Sound	★★★
Toughness	★★★★
Staying Power	★★★
Value	★★★

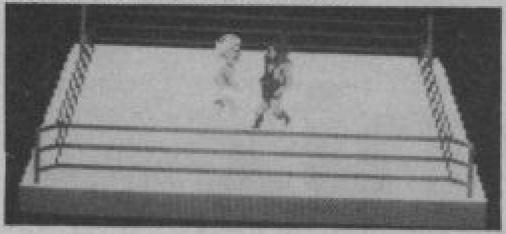
Rock and Wrestle

A reliable source at Melbourne House tells me that of all the big games they are about to launch — Lord of the Rings, Gyroscope etc., one game in particular has got the whole company jumping up and down with excitement.

The game is called *Rock and Wrestle* and comes from the team that programmed *Way of the Exploding Fist*.

The game was originally to be called Big Daddy's Rock and Wrestle but MBH changed their minds about this — apparently because they thought that a personality endorsement would detract from the excellence of the game. I don't know about that — maybe he just wanted too much money, but whatever the reason, the game certainly does sound as though it's going to be fabulous.

Ringside view of Rock and Wrestle. Final version will have spectators.

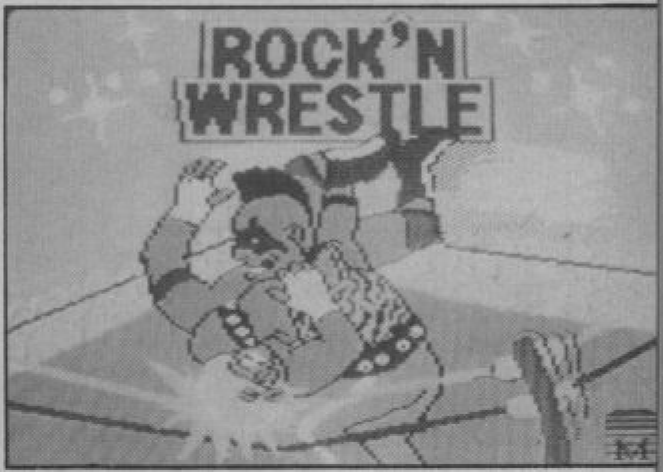


Melbourne House's Australian boss and head of software development, Fred Milgrom, told CU "It's the first genuinely 3D fighting game. You can explore all the ring as you pursue your opponents. It has everything . . . the music is amazing and it has many more potential moves than were in Fist".

MBH hope to cram no less than 32 moves into the game including Pile Drivers, Aeroplane Spins, Body Slams, Back Breakers, Arm Twists and even the infamous Turn Buckle Slides. Turn Buckle Whats? This is an illegal move where you jump up onto the rope and pounce on your opponent.

The Rock part of the title refers to the music that accompanies the action — hard hitting rock 'n' roll. Wouldn't you just know it — those Macho Aussies have to put heavy metal into their games.

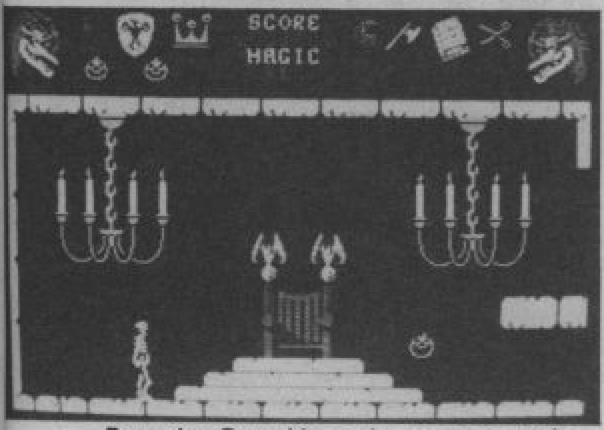
Talking of macho men, there are plenty of them in the game. They are your opponents — nine altogether: Angry Abdul the Arab Sheik, Viscious Vivian the Mohawk punk, Red Neck MaCoy, Lord Toff, Bad Barney Trouble the masked villain, L A Bruce, Molotov Mick, and Flying Eagle the Red Indian Chief.



The Mohawk Punk gets tough on the title screen of Rock and Wrestle.

You are Gorgeous Greig — the blond hero. Should be in the shops now at £9.95. A full G Force review follows next month. Don't miss it.

Cauldron II



Bouncing Pumpkin seeks revenge on the Witch in Cauldron II.

Cauldron II is being brewed slowly and carefully at Palace Software's coven — somewhere near Kings Cross station.

The action takes place in the Witches palace — a whopping 128 screens big it is too.

You play the part of a bouncing pumpkin who must search the palace to find the witch.

The pumpkin spins as it bounds through the air and bounces off the walls of the palace.

The graphics look as if they are going to be every bit as good as in the original game.

The pumpkin is a cute, constantly smiling, little character. But don't let the smiles fool you. It can spray out magic sparklers like nobody's business killing off the witches and nasties.

Steve Brown says that Palace don't want Cauldron II to be quite as difficult as Cauldron. That was so tough that Palace still don't know of anyone who has beaten it yet.

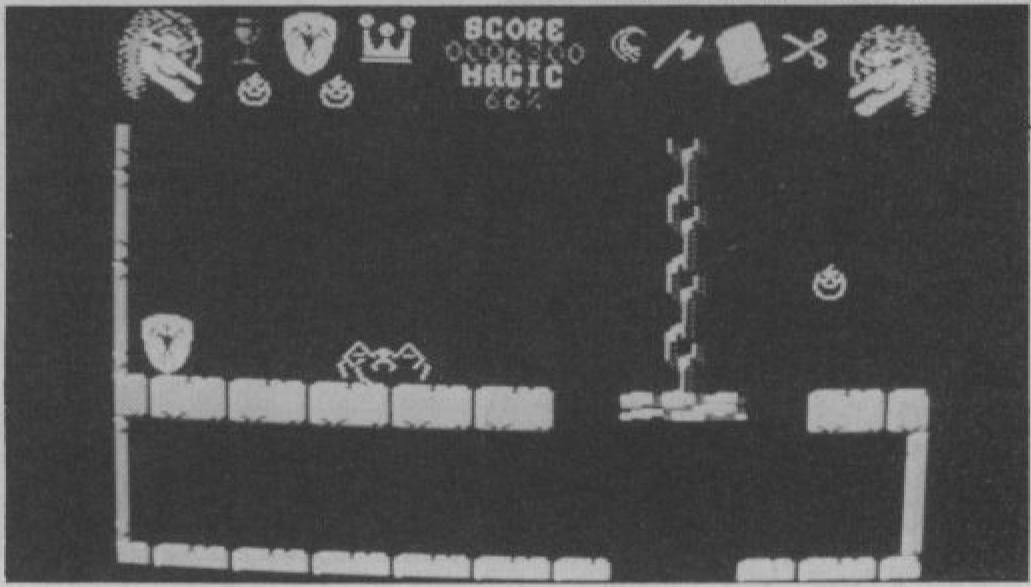
But don't get the impression it is going to be easy. It won't be. That witch is a tough cookie — cackling most annoyingly every time you lose a pumpkin.

The graphics look characteristically sharp and well animated — even in the incomplete state you see above. The nasties include some splendid stone gargoyles that move most disconcertingly. There are also skeletons and deadly pigs stalking that palace.

Palace are being very cagey about what the objective of the arcade adventure will be but I can tell you that you have to find the ingredients for a spell — just as you did in Cauldron I.

The launch date and retail price have not yet been decided, but don't expect to see it before March and don't expect to pay less than about £8 when it does appear in the shops.

Inside the Witches palace in Cauldron II.



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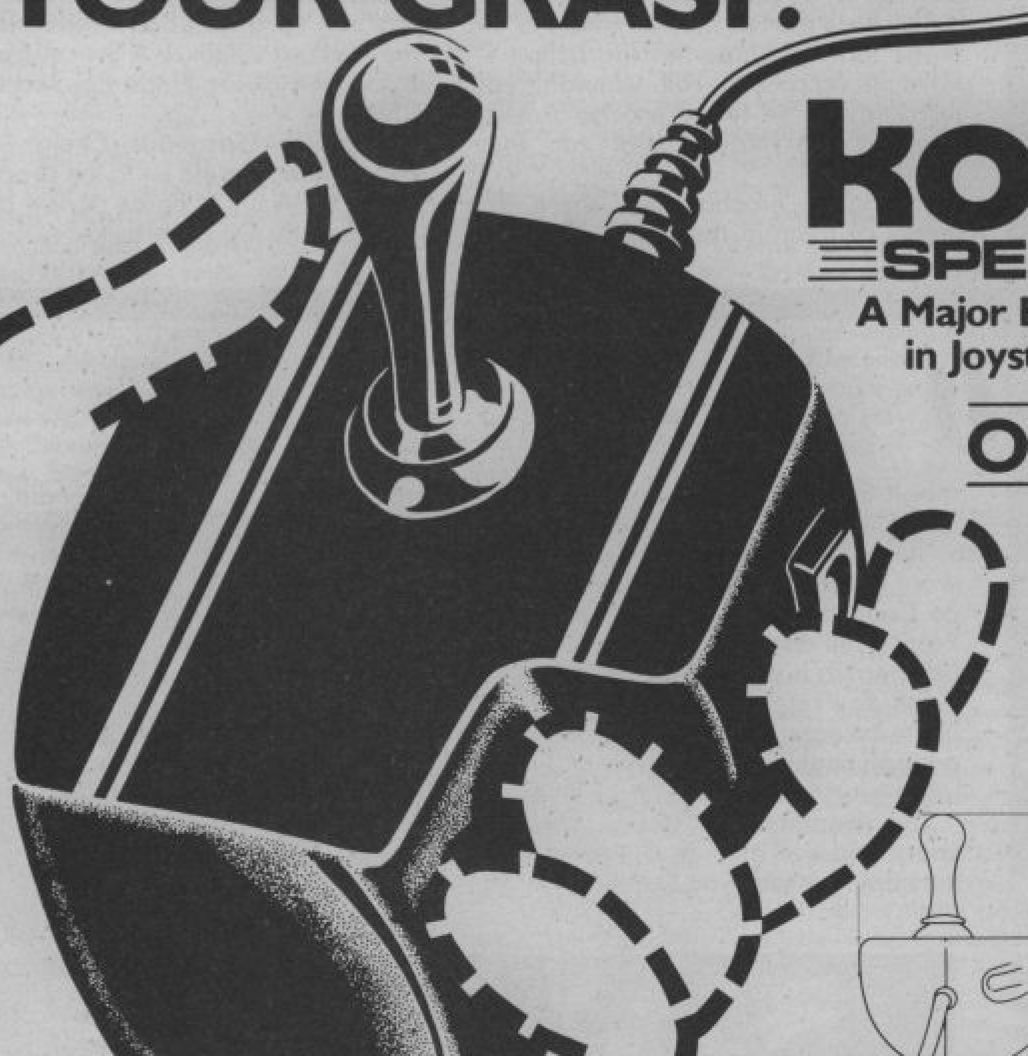
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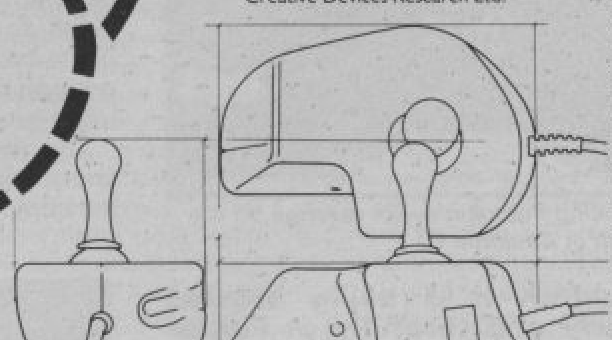
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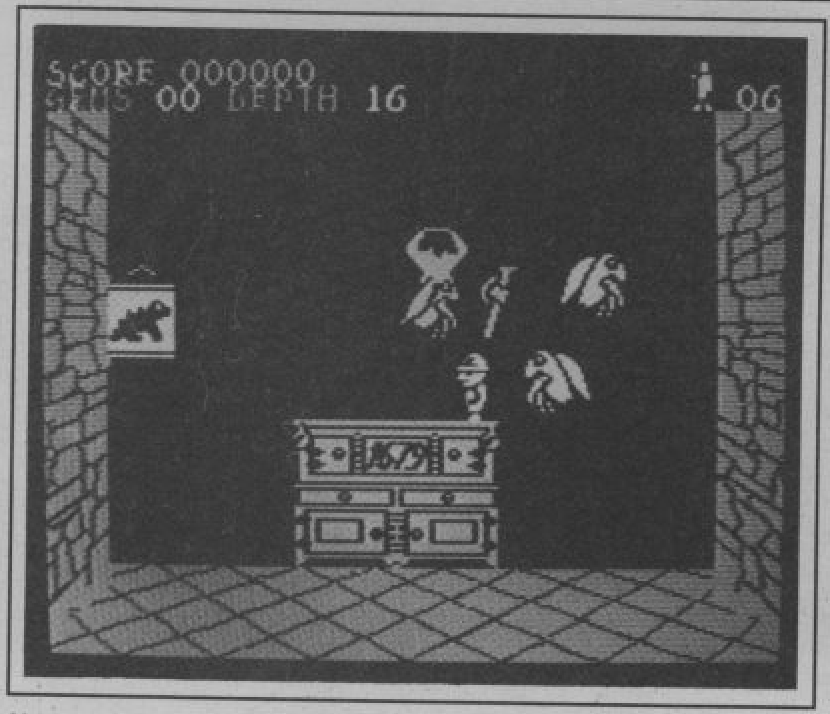
GRIP STICK · GR

Underwurlde
Commodore 64/128
Firebird
Price: £9.95/cass

This is a conversion of one of the big Ultimate hits on the Spectrum of late 1984. At the time it was somewhat overshadowed by the more innovative *Knight Lore* released just afterwards, but I've always found the game playable, entertaining and addictive.

The conversion does it full justice. Although only minimal attempts have been made to exploit the Commodore's superior capabilities, the effectiveness of Ultimate's original graphics and game-design will be enough to satisfty most people.

Unlike *Sabre Wulf* which now seems a little dated in its gameplay, *Underwurlde* contains a surprising number of elements which haven't so far been copied to death by other software houses. Take, for example, the role of the various, strange enemy creatures you encounter. Instead of killing you or sapping your energy on contact as in x thousand other games, here they simply knock you head over heels (in super-comical style), preventing you from going where you want to. You only die if they knock you off a ledge and you fall too great a distance.



Underwurlde — "Has stood the test of time remarkably well".

The game is set in a castle perched on top of a massive labyrinth of underground passages. You, taking the role of Sabreman, have to escape by finding a route through the passages, and tracking down the weapons required to get rid of three different guardians blocking your way.

The castle screens are bright and colourful with objects such as tables, clocks, pictures and eagle crests, all of which serve as platforms for you to leap onto as you make progress. In the earth-yellow screens of the underworld, jagged rock ledges served the same function.

But although *Underwurlde* is, in a sense, a platform game, it feels very different to most, because it takes place on a much larger scale. A single leap can take you right across the screen. There's also plenty of shooting to be done to keep those pesky aliens at bay.

Other pleasing elements include ropes to lower yourself on, volcanoes which emit rising bubbles you can jump on to, and eagles which can grab you and fly off on the wrong route.

It appears that the layout of the 500 plus screens of the Spectrum version has been copied precisely, right down to the locations where you're likely to find the weapons — so if you can dig out one of those maps that was published a year ago, it could come in handy!

In my view Underwurlde has stood the test of time remarkably well.

Chris Anderson

Graphics	★★★★
Sound	★
Toughness	★★★★
Staying Power	★★★★
Value	★★★

Thunderbirds
Commodore 64/128
Firebird
Price: £3.95/cass

Nobody out there needs reminding about Thunderbirds. Along with Captain Scarlet, they rank among the best kids TV programmes ever. Like Star Trek they'll run, and re-run on the box until we're all old fogies.

Firebird have acquired the licence to this Gerry Anderson classic, but have put the game out on their new Super-Silver range. Does this mean they've made a mess of it?

Judging from the titles already released, the range is well worth keeping an eye on. For not very much money, they offer a good deal of brain-teasing game play.

Thunderbirds is less impressive graphically than some, but arguably offers an even more satisfying puzzle. What is unusual about it is the fact that TWO difference space-craft with different characteristics have to be used together to crack the problems.

The ultimate aim is to rescue a team of Egyptologists trapped in an ancient tomb. The tomb takes the form of a catacomb of passages, sealed at numerous points by sliding blocks. Some of these blocks can be moved by Thunderbird 1, some by Thunderbird 2 and some by both. So the problem is to work out the right sequence of events (switching regularly from control of one craft to the other) to clear your way deeper into the tomb.

A further complication is that the craft are of different shape — one's short and squat, the other long and thin. Often only one of them can fit a particular passage.

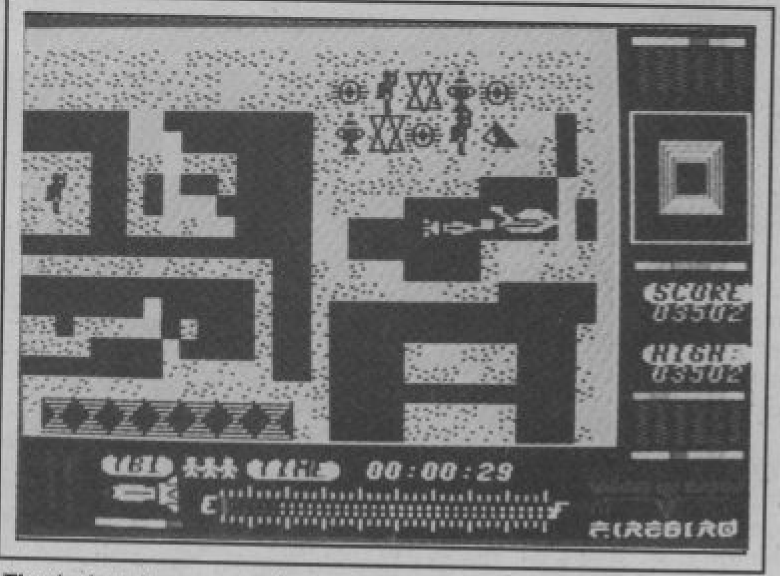
This means you may, for example, have to take one of the craft out of one screen, through several others, then back to the first screen by a different entrance which will then enable it to shift a block from the other craft's path.

Your task can be made considerably easier by taking on board certain items of equipment such as weed-killer, acid, and explosives. In certain screens these will automatically come into operation making your life easier.

Each piece of equipment costs you points, however, and so once you've solved the game with them, you can try again with fewer items.

One slightly bizarre feature is that the exits to each screen vary according to where, and in what craft, you enter them. Although this stretches one's credulity somewhat, it's an element you can (and must) exploit in solving some of the puzzles.





That's four brave men down there.

The graphics and sound are pretty rudimentary except at the start where an American voice intones 'Thunderbirds are GO' and a graphic sequence shows them blasting off.

However, this game is about puzzling, and on that level it's very pleasing indeed. The quality of Firebird's recent budget titles is good news for gamers. Most of them are a good deal better than Mastertronic — and only for an extra pound.

Chris Anderson

Graphics	★★
Sound	★★
Toughness	★★★★
Staying Power	★★★★
Value	★★★★

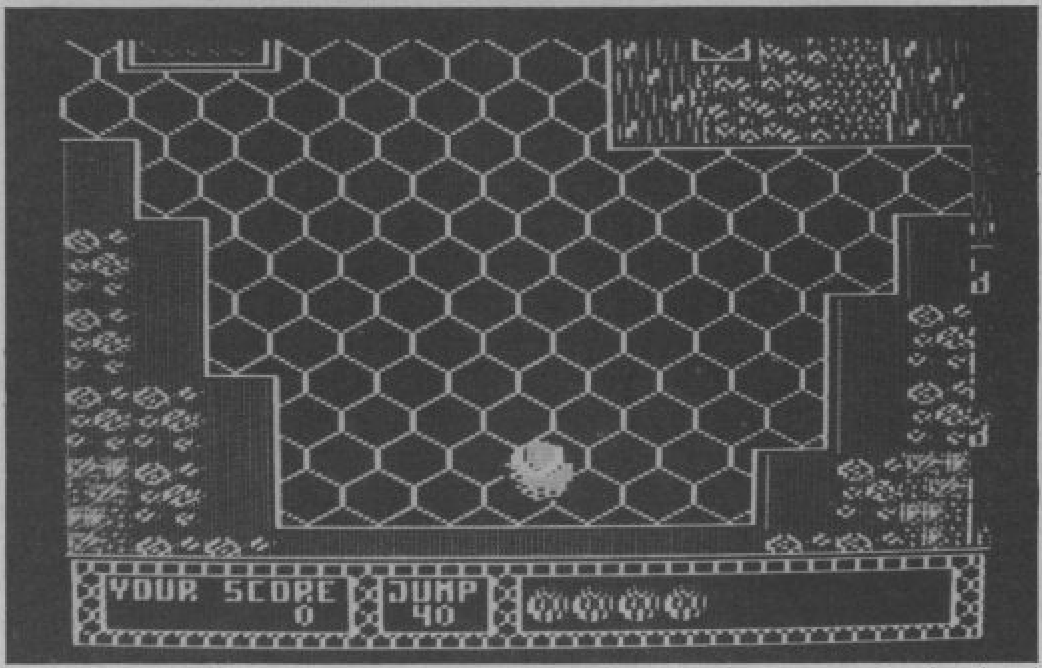
Bounder

Bouncer would be a better title for this game. I always thought a bounder was a chap with no manners as in: 'Sir you are a cad and a bounder' (pronounced binedah). Not according to Gremlin.

You control a tennis ball, which seems to bounce up and down with a will of it's own. Well not entirely it's own, there wouldn't be anything for you to do if that were the case. Computer hopscotch, that's what it is.

You get the aerial view, looking down on what the man from Gremlin said was mountainous terrain, but it didn't look very mountainous to me. Dotted about the place, and a frustratingly long distance apart, are what look like paving stones. When the action gets going the screen begins to scroll from top to bottom and the tennis ball starts bouncing, or bounding, depending on how you look at it.

You have to manoeuvre the ball so that every time it lands, it lands on a paving stone. In practice, this is a task equal in difficulty to picking your nose with mittens on. Not all the paving stones are the same. Some have question marks on them. These are a bit like the chance cards in Monopoly. Some are good news and reward you with extra lives if you land on them. Others conceal pairs of vicious, gnashing teeth which will chomp you to death as soon as look at you.



The paving stones with arrows on them are a sure shot if you can get to them, as they enable you to do a super jump — twice as far as an ordinary one.

When you have completed a level you get the chance to earn some bonus points before going on to the next impossibly difficult one. Oh, I nearly forgot, if you don't kill yourself by smashing into the mountains, or bouncing into a lava pool, the aliens will almost certainly finish you off.

I am looking forward to seeing a finished copy of this one.

Blade Runner

Blade Runner was the film that gave Harrison Ford his big break. The American actor played the part of a futuristic bounty hunter who earns his living by hunting down, and "retiring" Repliroids. "Retiring" the Repliroids is really a polite word for chasing them through the streets and blasting them with your laser.

But why should the Blade Runner want to kill the Repliroids? Because the human-like droids have mutinied on an "Off-world" colony and have been declared illegal on Earth.

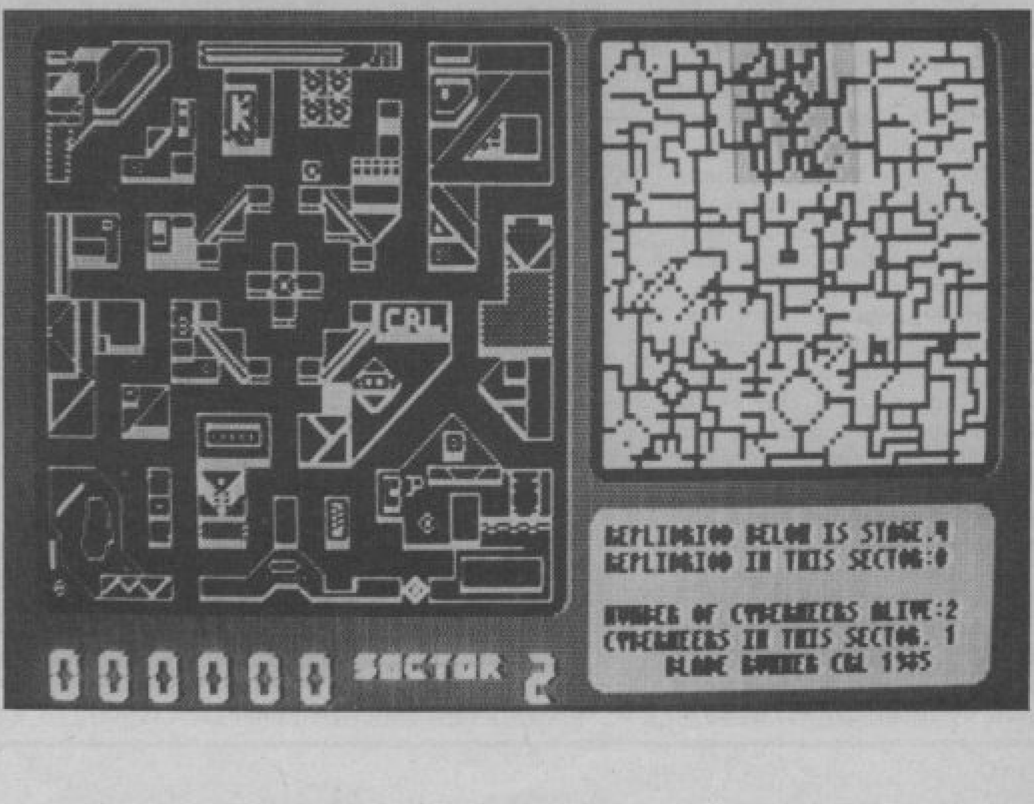
If you haven't seen the film it's on the box this Xmas so watch it. And if your grannie is around and someone insists on Scrabble, then get the video primed for Blade Runner is not to be missed.

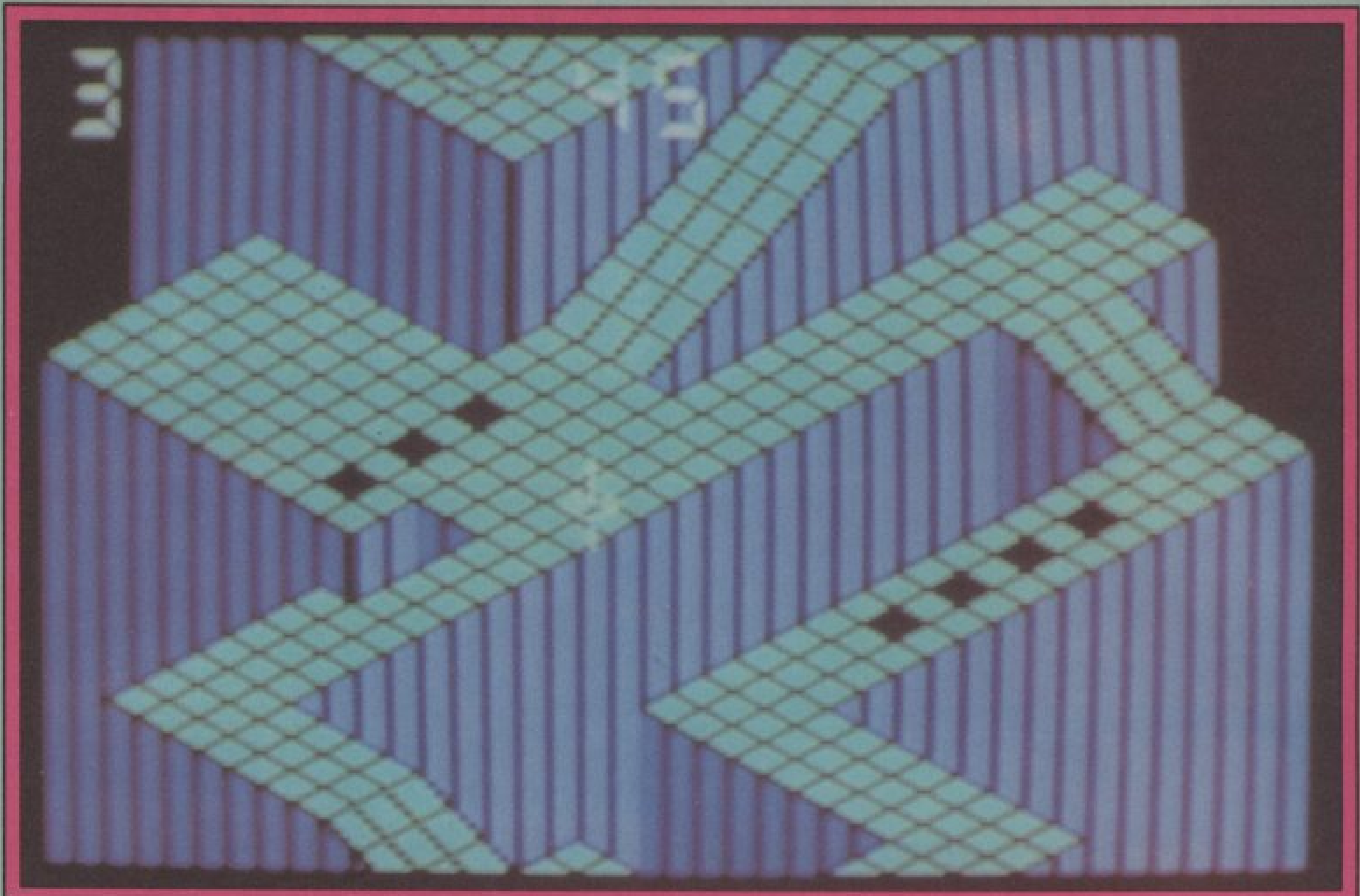
CRL's version is officially the game interpretation of the soundtrack rather than the film. But the plot is based on the Blade Runner movie.

Programmers Andrew Stoddort and Ian Foster describe the game as a "pursuit" game. To pursue the Repliroids you must first find them on a map of the city. Next, you select the street you want to go to and the screen will switch to that street with the Blade Runner craft descending slowly on to the pavement.

The fun part of the game is the chase — dodging the pedestrians and firing at the Repliroids which eventually fire back at you.

Full review and Blade Runner competition next month.





Gyroscope from MBH. Keep the spinning top on the chequered paths. Avoid the black squares — some of them will send you spinning off the edge.

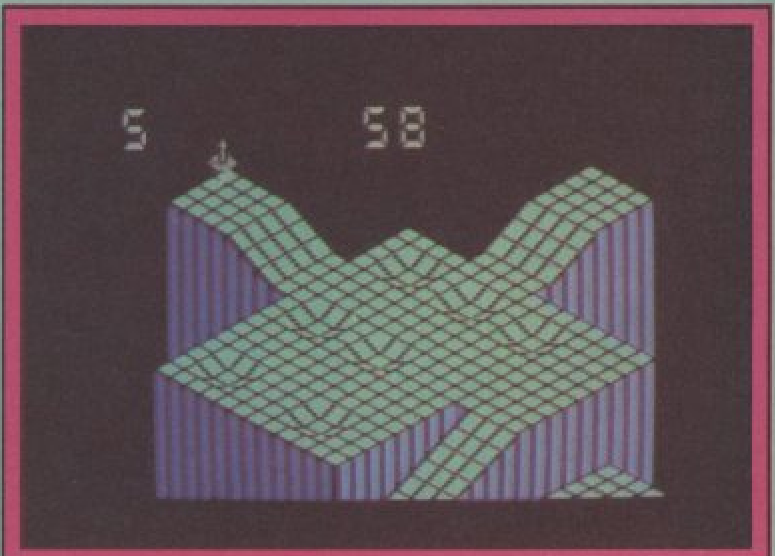
Gyroscope
Commodore 64/128
Melbourne House
Price: £14.95/disk
£8.95/cass

Gyroscope first appeared in the country's pubs and arcades about a year ago. Then it was called Marble Madness and was twenty pence a shot. Something which obviously didn't put Jeff Minter off, as he described it as the "most brilliant game ever".

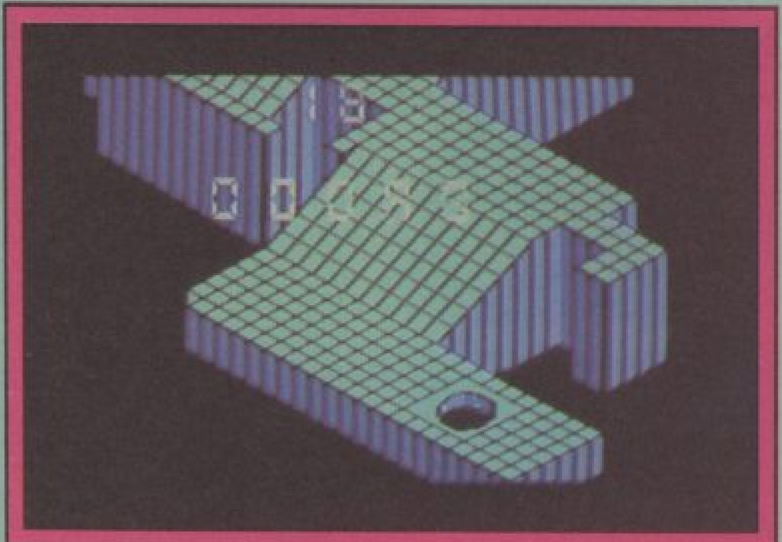
The only significant difference between Gyroscope and Marble Madness is that the marble has been replaced by a gyroscope! In most other respects, the game is virtually identical.

You control, or at least attempt to control a gyroscope which is spinning on a 3-D block graphic surface. Using the joystick you must manoeuver the gyro so that it doesn't bash into the walls or go flying off the edge.

This would be easy except that the surface is full of holes, dips, bulges and precarious narrow ledges. As if this weren't enough to foul things up, just when you're doing really well aliens appear from nowhere to topple your gyro.



Number top left shows the number of tops you have to spin through Gyroscope's thirty screens and six levels. Number middle shows seconds left to do it.



Watch out for the black holes — You're finished if you fall down one of these.

So the object of the game is to complete the thirty screens before losing your five lives or running out of time.

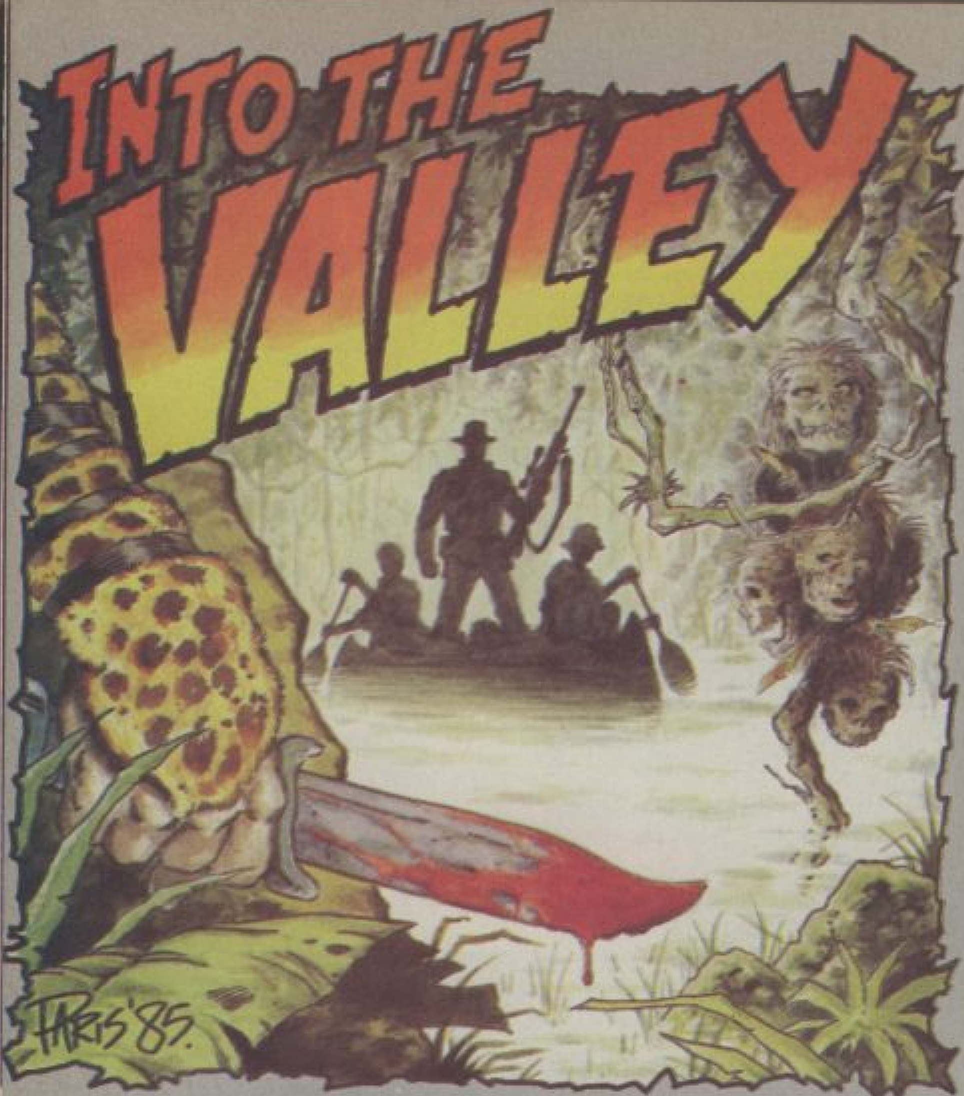
Stunning and brilliant are words too often used to describe average graphics, but Gyroscope really is excellent in this respect. The music is pretty good too. The most fascinating thing though, and what makes it so addictive, is the fact that it's so difficult. It took me half an hour to get through the first screen, but my skill and confidence improved rapidly — very gratifying. My money's with Jeff on this one.

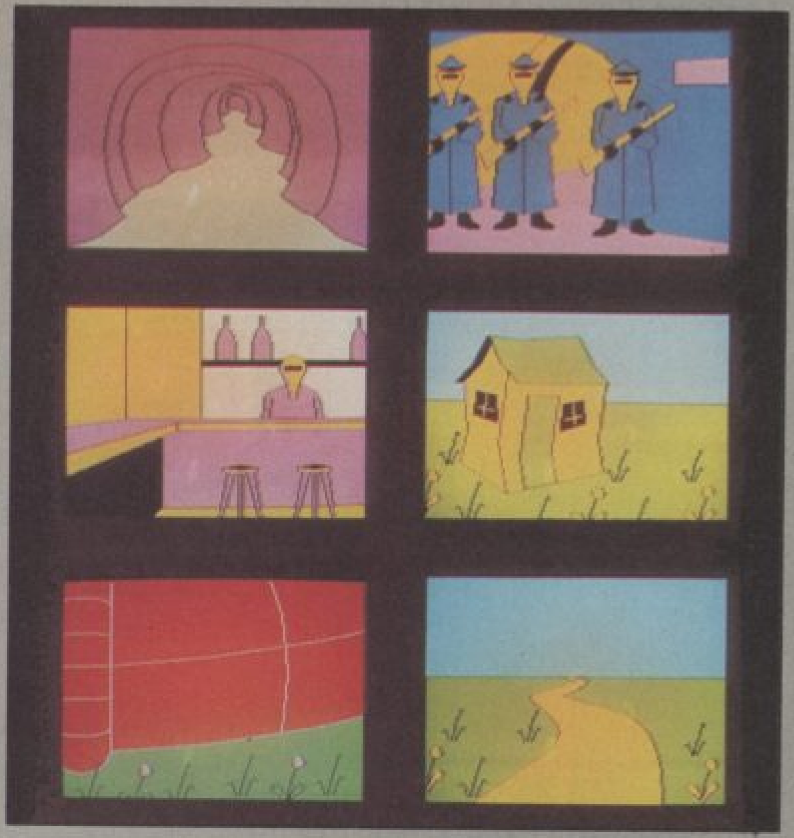
Ken McMahon

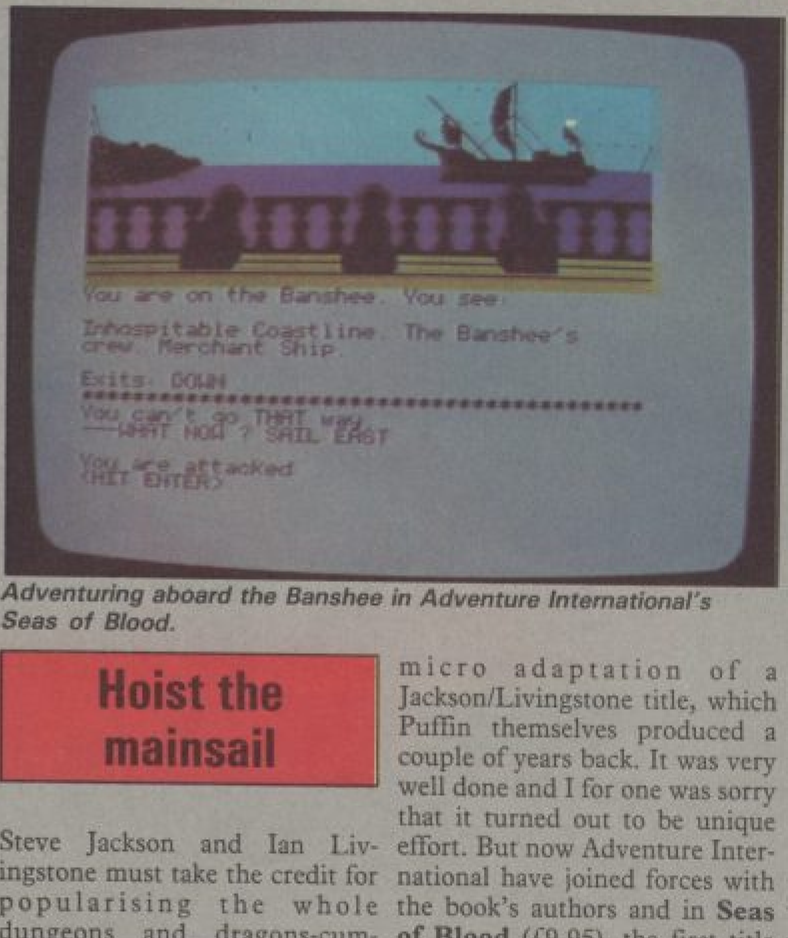
Graphics	★★★★★
Sound	★★★★
Toughness	★★★★
Staying Power	★★★
Value	★★★



There's never been a better reason for looking forward to Winter!
WINTER GAMES
Screens from Commodore 64 version of game
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Adventuring aboard the Banshee in Adventure International's Seas of Blood.

Hoist the mainsail

Steve Jackson and Ian Livingstone must take the credit for popularising the whole dungeons and dragons-cum-fantasy role-playing genre on this side of the Atlantic, and their Fighting Fantasy titles published by Puffin will be familiar to those who like to take a break occassionally from the micro to pass the time with a little good old-fashioned dice-throwing. They must now rival Jackie Collins in the number of paperbacks to their credit, though their characters and plots are rather more believable.

So far, there has been only one micro adaptation of a Jackson/Livingstone title, which Puffin themselves produced a couple of years back. It was very well done and I for one was sorry that it turned out to be unique effort. But now Adventure International have joined forces with the book's authors and in **Seas of Blood** (£9.95), the first title on AI's new Fighting Fantasy label, the programming skills of Brian Howarth and Mike Woodroofe have been applied to creating not only a first-rate 300-location graphic adventure but also one that incorporates combat sequences where the outcome depends on the throw of electronic dice.

Briefly, in *Seas of Blood* you assume the role of a pirate whose task it is, is to sail the uncharted seas, pillage the occasional merchant ship, and explore some extremely strange islands to further accrue wondrous treasures. The combat comes into it, of course, when you find yourself exchanging broadsides with your world-wide victims or engaging in hand-to-hand fighting with all kinds of other inconveniently unaccommodating adversaries.

There's little point in making the usual noises about the intrinsic quality of Seas of Blood because Howarth and Woodroffe must now indisputably rate as Britain's most prodigious and accomplished programming duo, and it is virtually impossible to find fault in the way that their adventures play. The parser will accept almost everything except Esperanto spelt backwards and still give a decent response. The graphics, typically, are crammed full of colour and detail (if only I could get to enjoy all 300 of them!), and however unfuriatingly obscure the challenges may be, you never feel (once you've fathomed the solution of course!) that they were illogical or unfair. There are more Fighting Fantasy titles to come so be warned, buy this one and you'll be hooked.





A tale of fantasy

The Neverending Story (£9.95) borrows pretty faithfully from Michael Ende's deserving international bestseller for its plot and play action. A small boy named Bastian Balthazar Bux discovers an old book that chronicles the eventful history of Fantasia — its dreadful decline under the evil force of the all-pervading Nothing, and the search for someone from the Real World who will help save Fantasia and its beautiful empress.

Bastian's wanderings in Fantasia and his encounters with weird and wonderful characters such as Rockbiter, Teenyweeny and Nighthob, and the gnomes Engywook and Urgyll — not forgetting adversaries such as Gmork The Werewolf — are inevitably the stuff of a terrific graphic adventure. And, yest — Ocean, until now known only for

BY JOHN RANSLEY

This month's column ushers in the New Year with two reviews of adventures which really set the standard for 1986. Ocean's *Neverending Story* and Level 9's *The Worm in Paradise*. There's a chance to win the Ocean fantasy in our regular competition slot as well. Other tasters include some starter games and Adventure International's swashbuckling *Seas of Blood* game, which allows you to pirate a game and still stay legal. All this, plus the most update news we can unearth and the only adventure chart in existence.

The worm has turned

The Austin 4 haven't just produced, in **The Worm in Paradise**, a new title — they've created a whole new ball game in adventure technology. You can bet your last hint sheet that rival labels will be burning much midnight oil over the next few months, trying to figure out how the heck systems designer Mike Austin has managed to improve yet further on Level 9's innovative programming. The latest title offers a 1000-word vocabulary, the most sophisticated parser ever incorporated in a cassette-based adventure, and the refinement of multitasking, so that the gamer can continue to key inputs without waiting for the drawing of a graphic to be completed.

The *Worm in Paradise* (£9.95) concludes the *Silicon Dream* triology, 1000 years after *Snowball* and *Return to Eden*. Eden now comprises a population of half a billion spread over 12 domed cities — and it's covered by strange, aggressive plants. Unlike most adventurers, you don't score points for collecting treasure; indeed, hoarding is illegal. The police, though, make a profit, through fines, prosecuting the wealthy, summary justice (very topical) and overlooking crimes which would cost huge sums to bring to court.

All the real work is done by robots, with humans concerned only with training schemes and pen pushing; status, not achievement, is the important thing on Eden. Meanwhile, the space robots have mined out the star system and colonisation has begun — though there is no place for humans in the new territories of the future. Who would want it any different? Maybe you, and that's where the adventure begins . . .

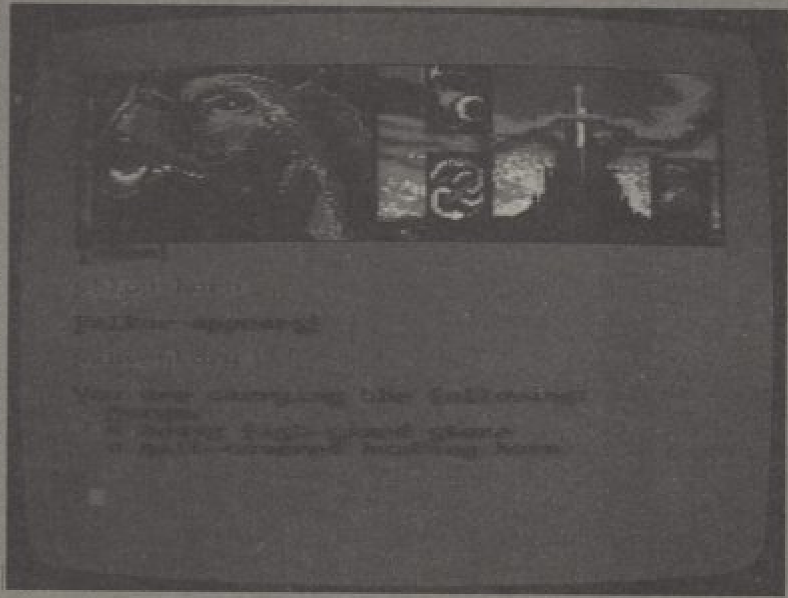
You'd have to spend an evening with a Roget's Thesaurus to come up with enough superlatives to do justice to *The Worm in Paradise*; it not offers stunning (albeit it at times disturbing) originality in the overworked realm of science fiction but also embodies state-of-the-art programming techniques which will allow you effortlessly to give full rein to your powers of creative deduction — and there are always those 200 or more colourful graphics to visually help you along the way.

The police (top right) can be bribed by selling your organs to the Organ Bank. If you haven't sold your stomach you can by a drink at the bar (middle right). Six random screens from 200 hundred in Level 9's latest.

their entertaining and addictive arcaders — have come up with the goods in their first-ever adventure title.

Programmer Ian Weatherburn, along with graphics designer Steve Cain and musician Martin Galway are the people we have to thank. The aforesaid Mr Weatherburn has successfully rung sufficient changes in the orthodox adventure to produce a puzzler that, in both the way it looks and plays, is very different from anything you've ever tried before.

Indeed, the game's visual presentation is faultless. Constantly on screen is a background widescreen landscape of Fantasia, which is forever changing as you progress through the game by way of inset panels illustrating the various characters met and situations which arise. There is also no shortage of objects to be collected and used, and, again, detailed vignettes of these appear or disappear from view on screen as they are added to, or dropped, from one's inventory. Travelling companions are also depicted.



Neverending Story — ten copies to be won.

This colourful and appealing kaleidoscopic display, which occupies about one-third of the screen, is augmented by generous blocks of text in a brilliantly redesigned character set that wouldn't disgrace an illuminated manuscript — though, thankfully, it's very much easier to read.

Text information given includes a description of the current location, the characters and objects found there, and possible exits. Single-key input speeds one's exploration of the map of Fantasia, and this has to be achieved in three stages. Such is the sophistication of *The Neverending Story*'s graphics and the fullness of its descriptive text that it occupies more than 100K — and this means a three-part Load; memory keeps hold of the important variables (such as what key actions you've taken and objects you've acquired) as these obviously have a bearing on your future success or failure. Just a little worrying, though, the the power feed to the datassette remains live after every Load, so that it whirrs away somewhat disconcertingly all the time one's playing. Not good for those with low thresholds of irritation — and probably not too healthy for the machine's motor either; the disk version at £14.95 doesn't have the same snags of course.

Apart from the single-key directional responses already mentioned, the parser accepts three-letter abbreviations of other words and verb/noun pairs. One nagging fault here is something I've found cropping up in other programs, and it's caused by the tendency of the 64's interrupt to be over-eager and snatch up two identical characters and feed them to the buffer if you leave your finger on the key for a fraction too long. This means that you keep getting lines such as Oopen ddoor and a surfeit of between-word spaces which the parser won't accept. it's difficult enough for an adult to beat this bug by being exceedingly delicate but the effort turned my 11-year-old daughter into a gibbering nervous wreck. Memo to Mr Weatherburn — how about a Mark II version with just the briefest of delay loops to beat this problem? — though it's one that may not occur on the 128 in 64 mode.

That apart (which is really an inherent fault of the 64 rather than the program), the parser itself displayed a couple of blind spots, such as responding to THROW ROCK with THERE IS NO VERB IN THAT SENTENCE, and insisting THERE IS NOTHING HERE TO CLIMB when I tried to CLIMB TOWER — it being mentioned as part of the location. Well, I've yet to meet the perfect parser, and these glitches don't really detract from the overall excellence of Ocean's very welcome baptism at the fount of adventure gaming. Watch out AI, MH, and Level 9 — the Mancunians are coming!

THE NEVERENDING STORY

ocean

Something completely different

About a couple of years ago, Dream Software came up with a highly original bit of frippery called **Quest for the Holy Grail** which, in the guise of a fairly rudimentary graphic adventure, gloriously poked Pythonesque fun at many of the personalities, products and conventions of the then fledgling British software industry.

You might not want to pay the original price of £6.95 if you came across this item of nostalgic software emphemara today, so hats off to Mastertronic for re-releasing it on their budget label at a mere £1.99

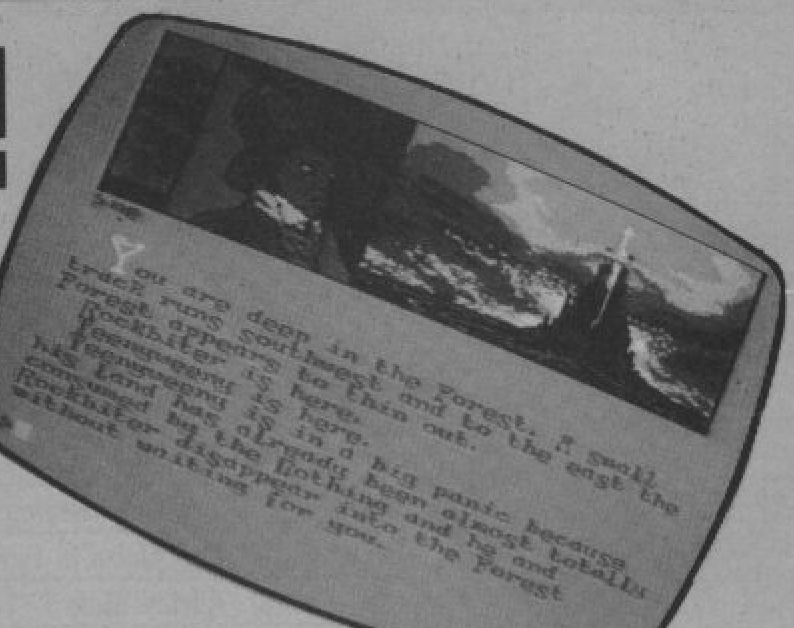
Humour is always a difficult thing to get right in software as much as anywhere else, but Grail is often genuinely very funny. There are plenty of locations to explore, and even if the graphics are pretty crude by today's hi-fi res standards, at least they're colourful and quickly drawn. No shortage of stumpers, either — and the parser works well and without any apparent il-logicality. At the price, you can hardly go wrong.

Also easy on the pocket is a new range of titles from Sentinent Software which I suspect owe much of their existence to The Quill.

I spent a couple of hours exploring two of them, **Crystal Frog** and **The amulet**, and have no hesitation about recommending them to new-to-middling adventurers. Screen layouts are clean and uncluttered and the technique of salting some easier problems at the beginning of these games makes it easier for novices.

Solve all the problems, collect all the objects and you're in for a 100 per cent score. Simple, satisfying stuff, and at £2.99 they're definitely worth sampling. Other titles available are *The Key to Time, Malice in Wonderland,* and *Scopp,* and more are on the way. Incidentally, that price tag doesn't provide for the kind of juicy profit margins dealers demand these days, so you'll probably need to mail order direct from Sentinent Software Ltd at 18 Branch Road, Armely, Leeds LS12 3AQ (0532 791136).

WIN NEVERENDING STORY!



There's everything to lose and Nothing to win in this month's teaser, thanks to the generosity of the crew at Ocean who've chosen to celebrate the launch of their first ever adventure title.

As my review reveals, The Neverending Story is a colourful and enchanting adaptation of Michael Ende's international bestseller. Already made into a hit film, this tale of a fabulous quest to save Fantasia from the all-consuming Nothing has now attracted the interest and talents of programmer Ian Weatherburn, who's come up with a game that's bound to entertain and delight adventurers of all ages.

The Neverending Story is spread over all four sides of a double-cassette pack and comes complete with very full playing instructions. At £9.95 that represents pretty smart value. We have no fewer than TEN copies for the lucky entrants in this month's easy-to-enter competition.

Who recorded the title music? Was it —

A. Vangelis?

B. Phil Oakey?

C. Limahl?

Circle A, B or C on the form below, name your three favourite current adventures, and don't forget to add your name and address.

The theme song from the Neverending Story was a hit for:

A B C (please circle your choice)

My three favourite adventures currently are:

....

Your Name ....

Address ....

....

....

Mail this whole coupon (or a copy of it on a postcard) to: Neverending Competition, Commodore User Magazine, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU.

● ADVENTURE NEWS ● ADVENTURE NEWS ● ADVENTURE NEWS ● ADV

● **All American Adventures'** Richard Tisdall reveals that *Masquerade* will be their next US import. Written by American Eagle Software's Dale Johnson and Rick Incrocci, it's a full-feature graphic adventure in which the player takes on the role of a Marlowesque private eye. It will probably be available on disk only at around £14.95.

● **Level 9** have spilt the beans about how they have finally managed to banish from *Red Moon* and all subsequent titles the raster dazzle that has been an enduring, if hardly endearing, feature of all their graphic adventures for the 64 in the past. But in truth the shimmering along the bottom of the hi-res windows containing the location graphics hasn't disappeared at all — simply artfully masked behind a false border constructed from black sprites programmed to appear superimposed on the hi-res background.

● Ocean Software programmer Ian Weatherburn, fresh from his success with chart bullet *The Neverending Story*, is already hard at work on his next epic, *Hunchback: The Adventure*. After two arcade successes based on the character, Ocean are now set to produce a rather more faithful interpretation of Victor Hugo's classic story of the deformed campanologist and his love for Esmeralda the beautiful gipsy girl. I've asked them to give me a bell when it's ready.

● **Firebird** may release a 64/128 version of *Runestone*, originally developed by Games Workshop and sold to the British Telecom offshoot when GW pulled out of software earlier this year. Runestone features 3D landscaping and a sophisticated parser that allows the player to engage in proper conversations with dozens of characters. Meanwhile, Firebird's Tony Rainbird is setting up a new software label with an advanced graphics adventure entitled *The Pawn* planned as one of the debut titles.



● **Activision** announce a much welcomed price tumble for *Mindshadow*, favourably reviewed in the Valley a few months back, now it's available on cassette at £9.95 — though elitists can still buy the disk version at £19.95.

Spanish tummy

Whether Ray Kearney will ever get around to shelling out the £25,000 he says it would cost to bring an action for alleged copyright infringement against the authors of Terrormolinos no one knows, but adventurers may at least enjoy some extra *frisson* from trying to spot the claimed 42 specific similarities he says exist between the holiday spoof **Benidorm**, which he wrote and published on the Little Softie label a couple of years ago, and the Melbourne House title from Hampstead authors Lever and Jones which surfaced last autumn.

In Benidorm, there are no graphics or snaps to take, but the challenge of surviving a week in one of Spain's less elitist resorts is, and certainly there's ample fun to be had in coping with the 21 wilful characters and goodness knows how many locations and problems. Because *Benidorm* was written from the ground up, it inevitably accepts more sophisticated inputs than the verb-noun pairs which the Quill-based newer title offers. It scores higher too in having features such as independent action by other characters in real time to keep you on your sand-rasped toes.

Another novel aspect of *Benidorm* is that the author is marketing three slightly different versions. In the one I played, the significant fantasy character is Lord Lucan, whereas in the others it is Shergar and a dragon. So don't rely on a friend who's conquered Benidorm to help you with all the right clues — his version may be different.

Not so much a *Benidorm v Terrormolinos* confrontation, then — because although there's no doubting the similarity of the theme and in some respects an eerie sharing of situations and even characters, the approach is very different in each case. So if you've played and like *Terrormolinos*, then it's very possible that you'll hugely enjoy the more sophisticated challenge set by *Benidorm*.

● CHARTS ●

	1	(1)	**Robin of Sherwood** — C64/128 (Adventure International, GrA, £7.95)
NEW	2	(–)	**The Neverending Story** — C64/128 (Ocean, GrA, £9.95)
NEW	3	(–)	**The Worm in Paradise** — C64/128 (Level 9, GrA, £6.95)
	4	(2)	**Adrian Mole** — C64/128 (Mosaic/Level 9, GrA, £7.95)
NEW	5	(–)	**Savage Island (Parts 1 & 2)** — C64/128 (Adventure Inter., GrA, £9.95)
	6	(4)	**Terrormolinos** — C64/128 (Melbourne House, GrA, £7.95)
NEW	7	(–)	**The Magician's Ball** — C64/128 (Global, GrA, £7.95)
	8	(5)	**Rats** — C64/128 (Hodder & Stoughton, GrA, £7.95)
NEW	9	(–)	**Super Gran** — C64/128 (Tynesoft, GrA, £7.95)
	10	(6)	**Mordon's Quest** — C64/128 (Melbourne House, TA, £5.95)

Five brand new entries bring a special sparkle to the Valley's first chart of '86, which strongly reflects the quality and popularity of the blockbuster adventures released shortly before Christmas.

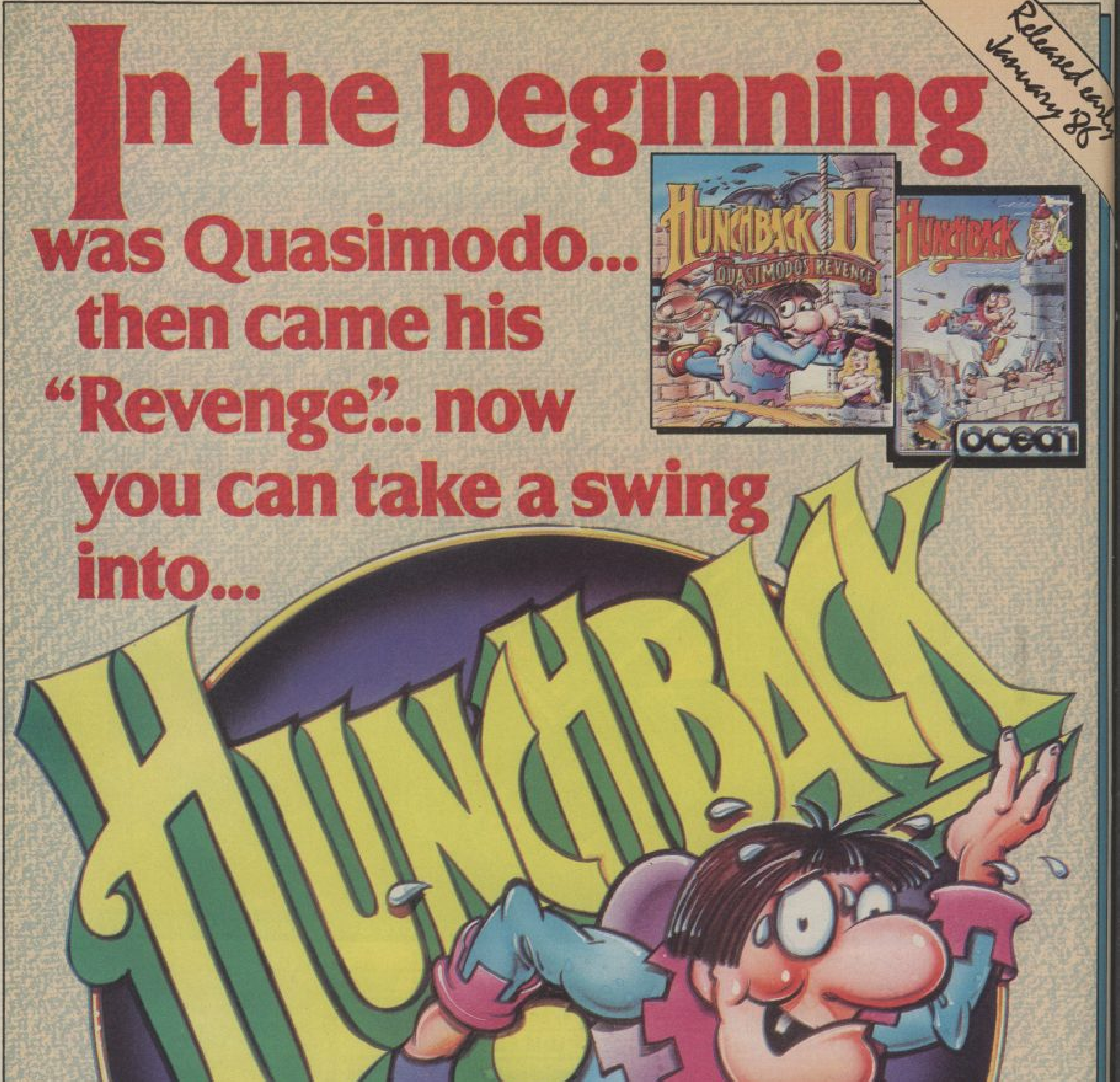
Even so, the lad from Loxley isn't yet ready to sling his grappling hook, though Ocean's first ever adventure title seems likely to have an even happier ending by next month.

Level 9's eagerly awaited sequel to *Return to Eden* also wastes no time attempting to repeat the success of its predecessor. Not far behind, one of Scott Adams' all-time classics makes a welcome reappearance thanks to AI's value-for-money reissue, which wraps up both self-contained games for under £10 — and that's for the graphic version.

Also making their chart debuts are two titles favourably reviewed in last month's Valley. *The Magician's Ball* rolls into the No. 7 spot to the sound of Tubular Bells, while the tartan heroine of the pension queues, in a splendid romp penned by AI's own Mike Woodroffe and Brian Howarth (which comes in a double pack with the Super Gran arcader) seems set to make a few more wee dents in the ratings.

ure.

compiled by Fred Reid. Apart from being our resident sound expert and a 64 enthusiast, Fred is the sound technician at one of London's top jazz clubs. He's been involved in the development of music systems for the 64 and is currently setting up a professional sound sampling facility.



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FREE PULL-OUT GUIDE

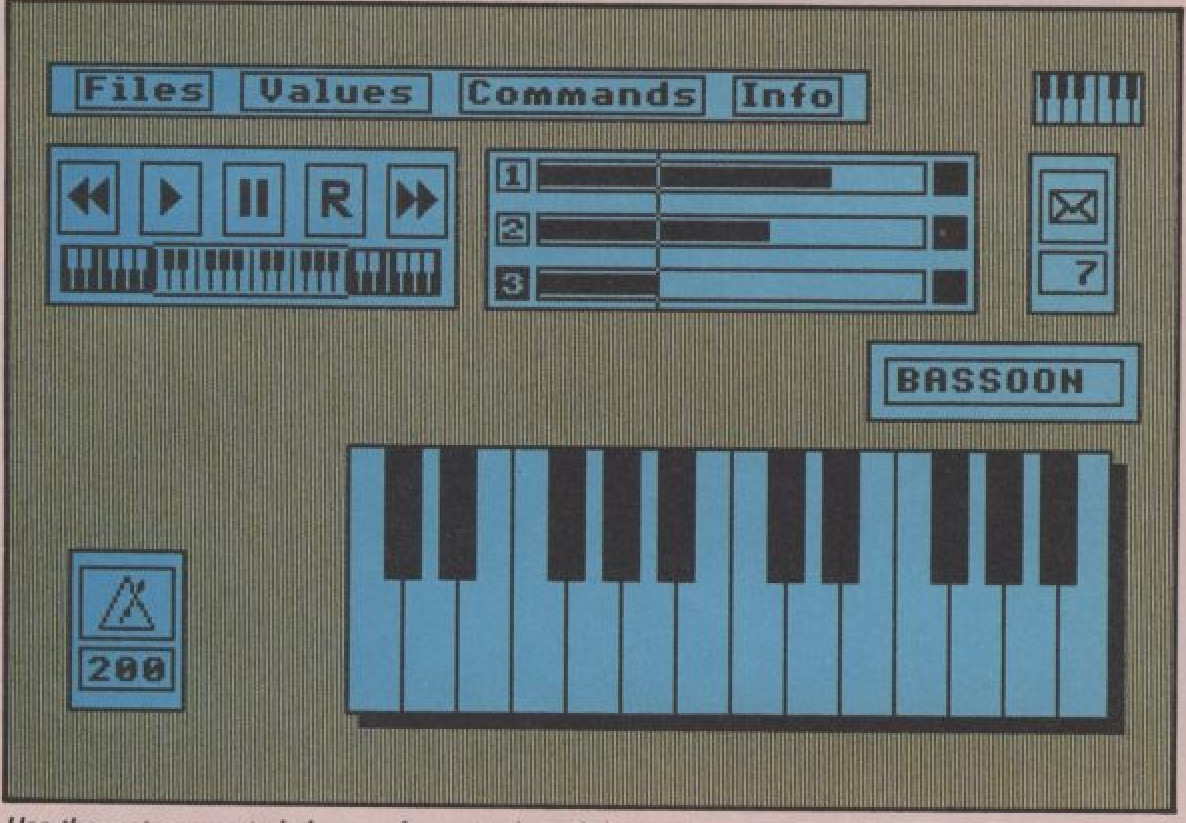
64 SOUND GUIDE

CONTENTS



This 64 Sound Guide has been specially compiled by Fred Reid. Apart from being our resident sound expert and a 64 enthusiast, Fred is the sound technician at one of London's top jazz clubs. He's been involved in the development of music systems for the 64 and is currently setting up a professional sound sampling facility.

THE MUSIC SYSTEM



Use the metronome to help you play notes in real time.

- **Firebird Software, Welling House, Upper St Martin's Lane, London WC2H 9DL**
- **Phone 01-379 6755**
- **Price**
  Advanced: £39.95 (disk only)
  TMS: £14.95 (cass/disk)

The Music System (TMS for short) sells in two versions: the original TMS on cassette and Advanced TMS on disk only. We'll start with the latter.

TMS comprises six separate but interactive modules: step-time editor, sound editor, real-time composer, MIDI composer, printer driver and linker module. All are accessed from a central menu.

Taking the Music Editor first, notes are entered simply on the on-screen staves, and all musical functions like sharps, flats, ties, triplets and repeats are implemented. The music scrolls to the next position as you enter notes. Simply pressing a key changes voice, and you're positioned immediately at the point you left off.

Notes can also be input in real-time, using the 64's keys as a keyboard, the note's name and position being duplicated on the on-screen keyboard. Nice touches are a metronome to help you keep time and pictorial cassette recorder keys for record, playback etc.

Pop-up menus are used to adjust all parameters, including time and key signatures, and which of the three voices you're working on. Above the stave window, you'll find control windows for volume, the bar of music currently in view, note counter and bar-meter that tells you where you are in the composition and which voices are on or off.

Any combination of voices can be selected for playback. Using only one voice, you can watch the music scroll across. The linker module lets you string together pieces for a longer combination for playing consecutively.

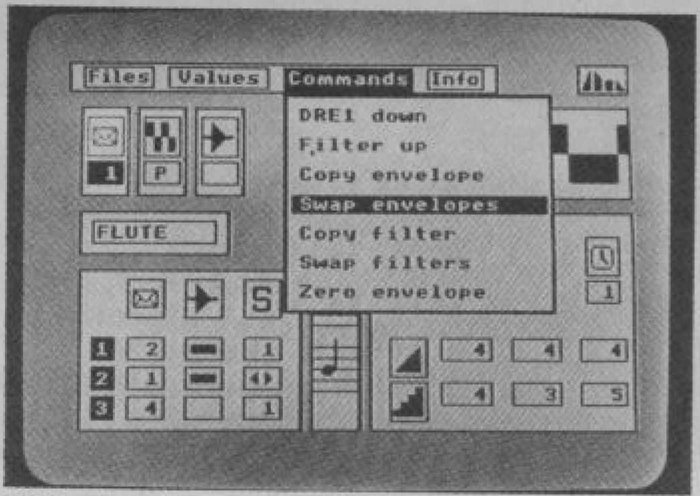
On to the sound Editor, which lets you alter ADSR and effects values, by playing around with the shape of a graph — novel idea. Helpfully you can hear the sound change as you experiment.

Finally, the printer module lets you print out a score and add lyrics to it. Various printers are catered for, including Commodore's MPS 801 and 802, the Epson RX and



Most bands fail to use computers and synthesisers to their fullest extent. Little warbles or a throbbing dirge is what you get from most groups. There are, of course, notable exceptions: *New Order, Soft Cell* and, of course, *Heaven 17*.

64 SOUND GUIDE

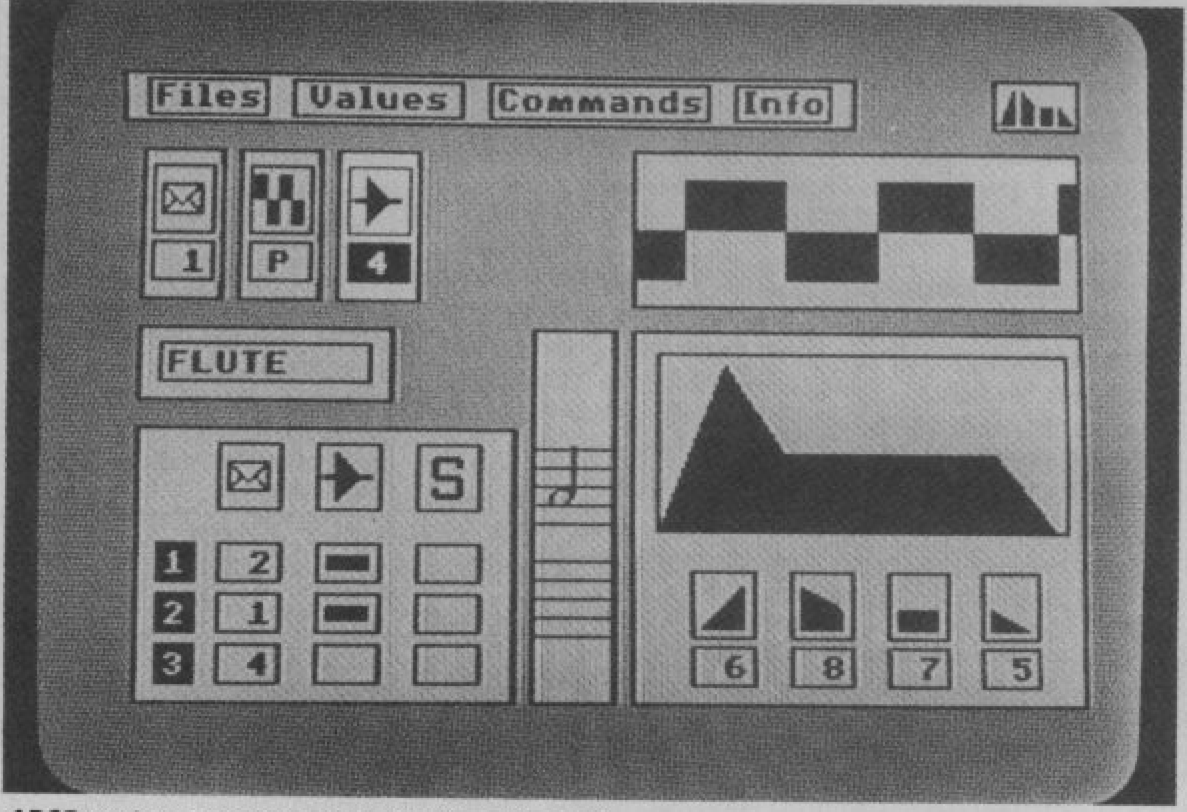


TMS makes the most of icons.

FX range and Star SG10. There's also a MIDI interface that lets you connect to an external synthesiser keyboard and play music back to the synth using its own sounds.

The original Music System on cassette uses the same structure but leaves out the step-time editor, MIDI printer and link modules. Funnily enough, you get both the TMS and 'advanced' manuals, excellent as they are, with the cutdown cassette version, probably to show you what you're missing.

TMS is not only a remarkable piece of software but a very comprehensive and easy to use music package. It's added advantage is that you can choose your level of sophistication.



ADSR settings are presented in the form of a graph.

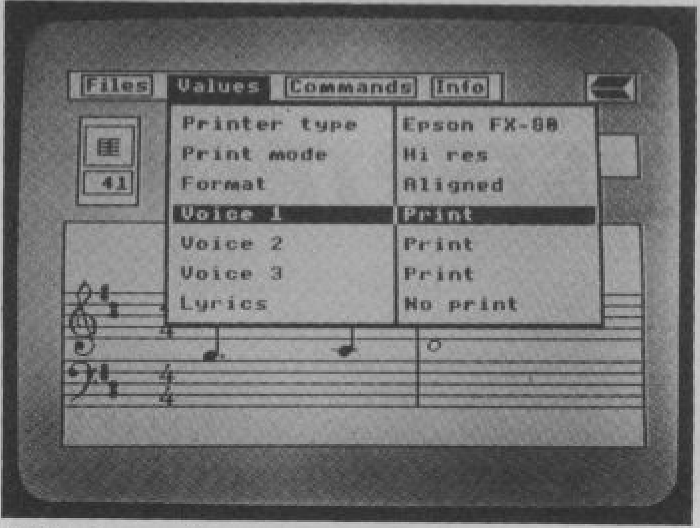
The musical core of Heaven 17 is Ian Craig-Marsh and Martyn Ware, who were two original members of the Human League. They were responsible for records like 'Being Boiled' which spawned countless imitators. When Phil Oakey took the League off to become a pop group with the classic album 'Dare', Ware and Marsh stayed behind, recruited vocalist Glen Gregory and had a dancefloor hit with 'Fascist Groove Thang'.

They got funky with 'Penthouse and Pavement', recorded an album of covers as the British Electric Foundation and got serious with the Luxury Gap. They were literally instrumental in Tina Turner's come back and recently recorded an album 'How Men Are', experimenting with a 40-piece orchestra. You're bound to have heard their biggest hits like 'Temptation' and 'Come Live With Me'.

Their varied style and history has made them ideal musicians to put Firebird's *The Music System* to the test. As Glen Gregory put it: ''Computers can take pop music just anywhere in the future.'' The band were so impressed by the system's capabilities that we've decided to give away five free copies of TMS. All you have to do is answer the questions in our synthesiser pop trivia quiz that follows. The clue is in the title — all the artists concerned use synthesisers on keyboards or computers in some way.

1) Which pioneering synth band had a hit with *The Model*?
2) Which well-known keyboard group had a hit about the plane which dropped the Bomb on Japan in 1945?
3) Which two actors appear on Paul Hardcastle's latest hit 'Think about the Money'?
4) Who recorded the theme to 'Chariots of Fire'?
5) Trevor Horn produces which computer game group?

Send your answers on a postcard to Synthipop Quiz, Commodore User, 30-32 Farringdon Lane, London EC1R 3AU. Entries to reach us no later than 15 January 1986.

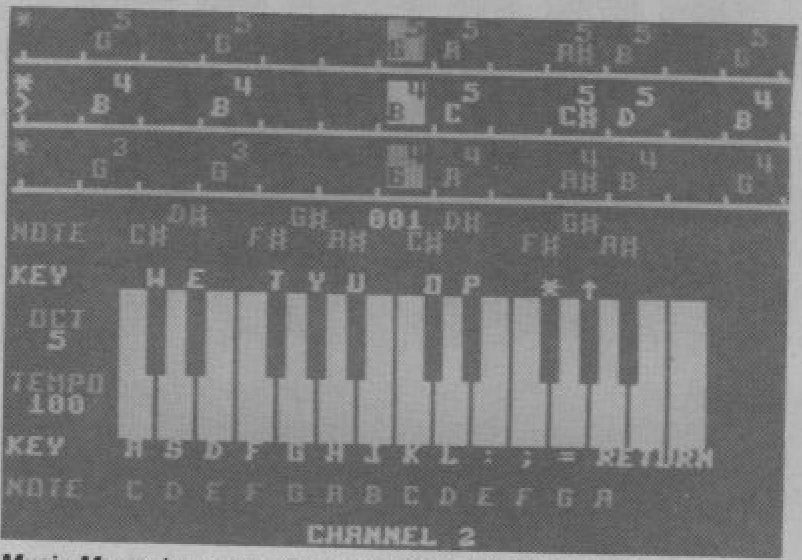


TMS lets you print out your completed score.

Stave notation	: yes (d)	Load/save	: yes
Record modes	: step /real (d)	Printer	: yes
		Tempo	: yes
Record modes	: step only (c)	Transpose	: yes
		Tuning	: no
MIDI	: yes	Edit sounds	: yes
Edit rhythm	: yes	Graphics	: 10
		Easy use	: 10

Note: (d) and (c) indicates the function is only available on disc or cassette versions.

MUSIC MASTER



Music Master's screen displays a piano-type keyboard.

- **Supersoft, Winchester House, Canning Road, Wealdstone, Harrow, Middx.**
- **Phone 01-861 1166**
- **Price £19.95 (disk)**
- **Price £17.95 (cass)**

Music Master is perhaps best described as a musical word processor. Notes can be entered either in step or real-time and to make things easier in real-time, the system only records while a key is being pressed. This gives the user plenty of time to stop and think. Rhythms can then be entered separately by tapping any key. Any of the three available voices can be entered and edited in this way, whilst either of the other two voices are playing back.

The screen displays a piano type keyboard, with the names of the notes marked on it, as well as what key you have to press to play that note. When you play a note, or when Music Master plays back, a picture of a finger tip appears to press the key.

You don't have to record your music to enjoy Music Master, you can just play tunes on the 64's keyboard to one of Music Master's eighteen built in accompaniments, or to your own pre-recorded backing tracks.

The musical stave is not implemented here, instead you get a 'list' of the note names, which octaves and for how long the note is played. Whole blocks of notes can be copied to other parts of the score, and notes from one voice can be copied to another.

Any of the preset sounds can be edited and saved off, or you can create your own from scratch. All of SID's functions can be controlled and there are several additional features implemented in software. Wave shapes from voice three can be copied to memory and used for modulation.

To sum up, Supersoft have obviously gone to a lot of trouble to get this right. The lack of a proper stave is adequately compensated by the excellent sound editing facilities.

Stave notation	: no
Record modes	: step /real
MIDI	: no
Edit rhythm	: yes
Load/save	: yes
Printer	: no
Tempo	: yes
Transpose	: no
Tuning	: no
Edit sounds	: yes
Graphics	: 6
Easy use	: 6

MUSIC STUDIO

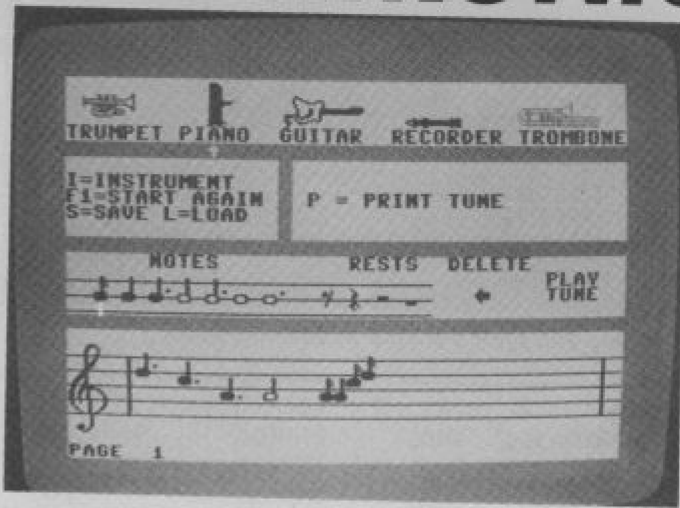
- **Activision, 184 Regent St., London W1**
- **Phone 01-439 7731**
- **Price £14.99 (tape) £19.99 (disk)**

Music Studio is available in both cassette and disk versions although the basic operation is similar. In either form, the software arrives in a library case along with a pocket-sized manual (comprehensive despite it's size) that even contains a brief tutorial on music theory.

Music Studio lets you use either a joystick or a touchpad (such as the Koalapad) to control the software functions. The music editor screen is dominated by the stave, with the lower third of the screen given over to the 'menu'. Each item on the menu is depicted by a picture or symbol and when the cursor rests over the picture of the function you wish to use, simply pressing the fire-button will set things in motion.

Writing music couldn't be simpler. Move the cursor over to the note symbol, press the fire button to select note entry and again to alter the note

MISTERTRONIC



Mistertronic makes music on the cheap.

- **Mastertronic, 11 Park Road, London NW8**
- **Phone 01-402 3316**
- **Price £1.99 (cass)**

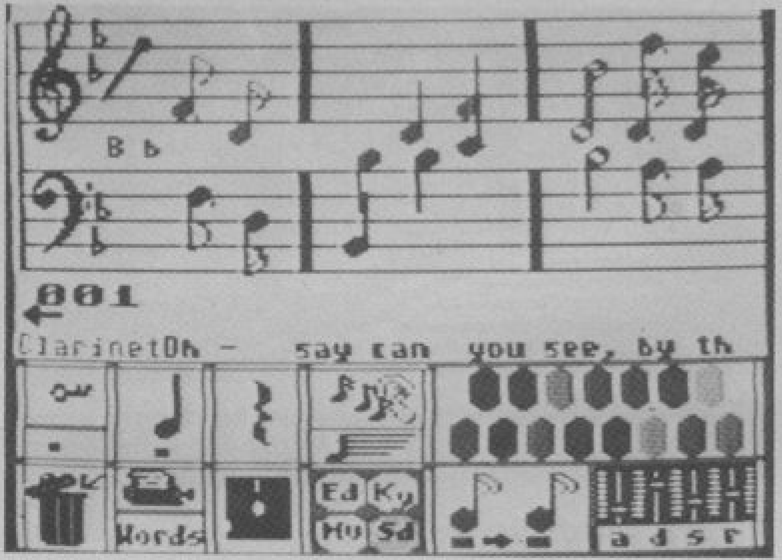
Make Music with Mistertronic is a music composer package aimed at the six to nine year-old bracket. Featuring single voice step-time entry on a proper stave, this little gem is not just fun to play with (kept me amused for hours), but also highly educational.

The main screen displays a choice of five instruments across the top, a selection of notes and rests centre screen, and a stave at the bottom. Notes are collected from the middle area and deposited on the stave using either the cursor/space bar or a joystick. A full range of note values is available including dotted notes and rests, and playback is fully automatic.

Once your tune is written (no editing other than 'delete last note') you can save to tape for future use, or dump it on a suitable printer (no details given). The instructions are printed on the cassette sleeve and are kept to the minimum, and repeated on-screen. There are even three sample tunes to load in on the 'B' side of the tape!

Although the voices sound nothing like the instruments they represent, this package is excellent value, educational, fun. What more could you want for the money?

Stave notation	: yes
Record modes	: step
MIDI	: no
Edit rhythm	: no
Load/save	: yes
Printer	: yes
Tempo	: no
Transpose	: no
Tuning	: no
Edit sounds	: no
Graphics	: 9
Easy use	: 10



Writing music couldn't be simpler with Music Studio.

length (from semiquaver to semibreve) as you desire, and move the cursor up to the stave. As you reach the bottom of the stave the cursor is replaced by the selected note and you simply position it at the desired place on the stave. Pressing the fire button fixes the note in place and you can then position another note.

When you've entered a few notes to hear what you have written, just point the cursor at the picture of an ear. Press the button and Music Studio obliges with a note-perfect rendition of your masterpiece. Various editing options include delete and insert a column (of notes), move a block of notes, copy a block of notes to another part of the stave etc. Selecting the picture of a synthesizer panel will get you through to the sound editor screen.

The sound editor lets you select and edit any of the 16 preset sounds that are automatically loaded with the main program. To alter a sound to your own specification simply select the instrument you wish to change (with the cursor), select the function to alter and modify to your heart's content.

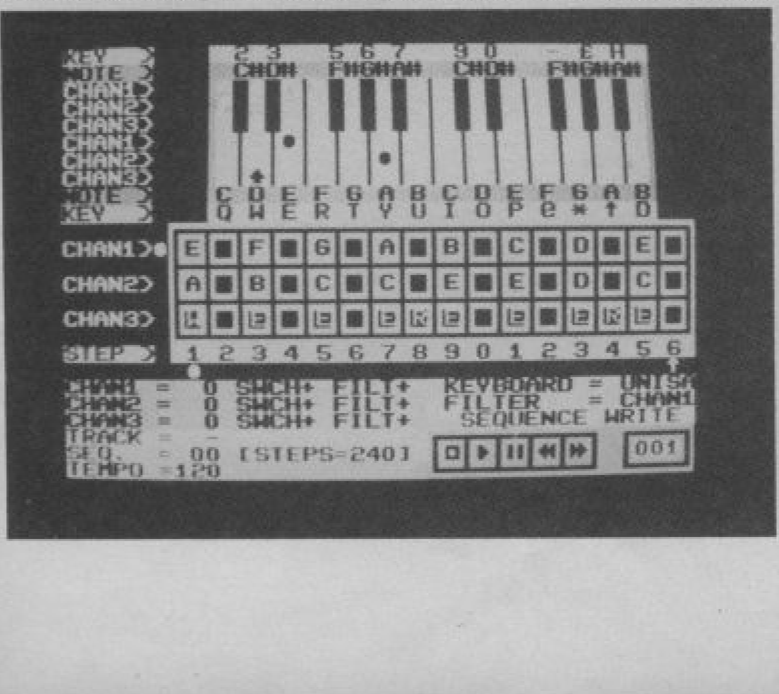
The overall effect is not far distant from an actual synthesizer panel, thanks once again to Music Studio's stunning graphics. To exit this screen, simply take the cursor off the bottom of the page, press the button, and you arrive back at the music editor screen again.

Paintbox mode is a kind of parallel to the music editor. You still get the stave and a menu, but this time the emphasis is on shape and colour rather than strict musical notation. The general idea is to 'paint' the sounds onto the stave using different coloured lines.

Overall, a beautiful piece of software, nicely packaged, well documented, and sensibly priced.

Stave notation	: yes
Record modes	: step
MIDI	: no
Edit rhythm	: yes
Load/save	: yes
Printer	: yes
Tempo	: yes
Transpose	: yes
Tuning	: yes
Edit sounds	: yes
Graphics	: 10
Easy use	: 8

Electrosound's sequencer showing keyboard and all three channels.



64 SOUND GUIDE

ELECTROSOUND

- **Orpheus Ltd., The Smith, Unit 1, Church Farm, Hatley St., George, nr Sandy, Beds.**
- **Phone 0767 51481**
- **Price £14.94 (cass.) £18.95 (disk.)**

Electrosound is a familiar sequencer and sound editor type package. It's five main options offer Manual play, Sequence write/play and Track write/play. Manual play uses the upper part of the 64's 'qwerty' keys, imitating that of a piano keyboard. The actual keys used (CTRL through to RESTORE for the white notes, the black notes corresponding to the appropriate number keys), just happen to coincide with the Commodore overlay keyboard, offering a welcome alternative to labelling the appropriate keys with bits of masking tape (leaves a sticky residue behind)!

In manual play mode, you can choose any combination of three from an initial set of ten sounds. A further selection can be obtained by loading in one of the four alternative sound sets supplied. The preset sounds are quite impressive; offering a vast range of sounds, noises and effects; particularly impressive when hooked up to a hi-fi.

Editing the preset sounds to create your own vibrations and variations is made tricky by the rather complex screen display and unfriendly instruction manual. But, with a little perseverance and a watchful eye on SID's limitations, there's not a lot you can't do.

The sequencer also offers three simultaneous voices, using any of the preset sounds or those you've created yourself. Notes are entered on a left/right scrolling grid that behaves rather like a taperecorder being recorded, rewound and played back. Once again, the instruction manual leaves rather too much to the imagination.

As each sequence is rather short, the track write/play option lets you link sequences together to make longer compositions. Some excellent examples can be found in the demo program at the end of the tape (or disk).

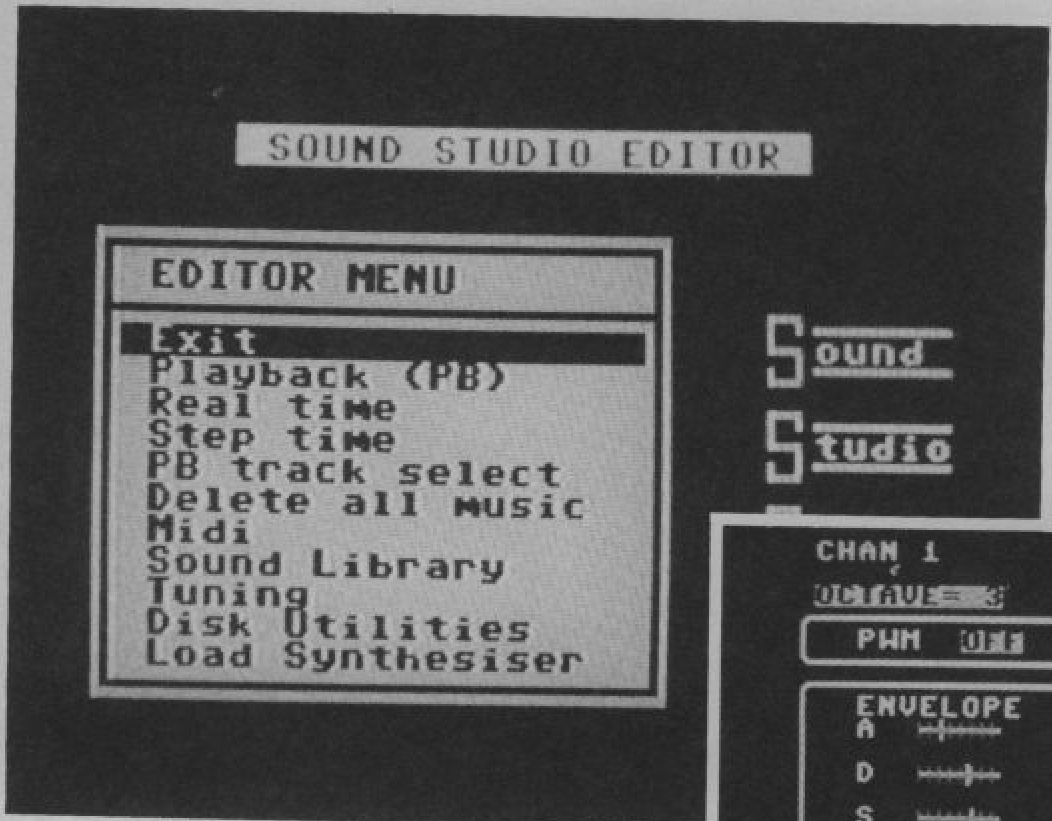
In conclusion, I think it only fair to warn would-be composers of the complicated nature of Electrosound 64. Those without the experiences gained from other similar program formats may well be dissappointed with Electrosound's initial performance, but the scope this program offers warrants some perseverance and experimentation.

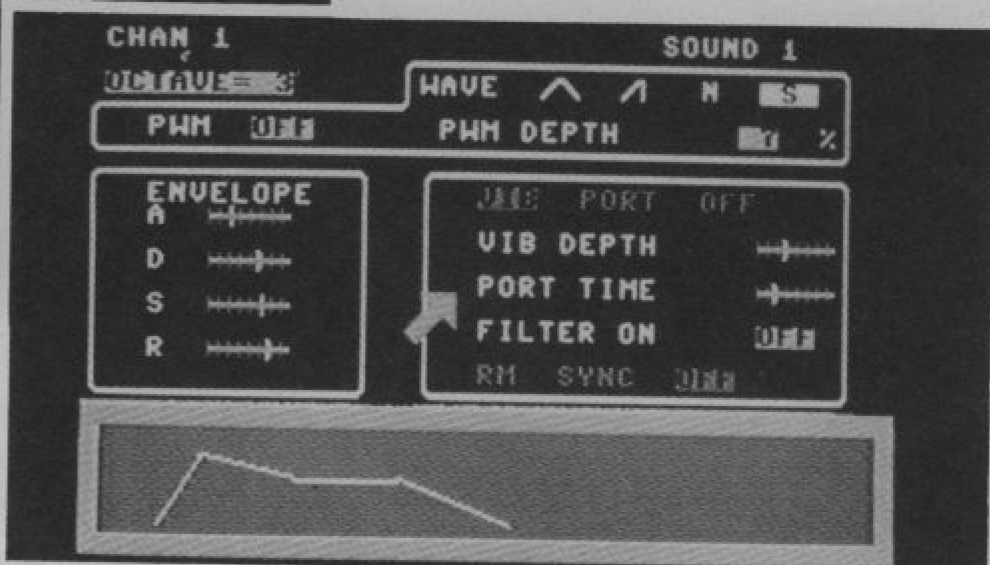
Stave notation	: no
Record modes	: step
MIDI	: no
Edit rhythm	: yes
Load/save	: yes
Printer	: no
Tempo	: yes
Transpose	: no
Tuning	: yes
Edit sounds	: yes
Graphics	: 5
Easy use	: 3


BEYOND
BUMPER CHRISTMAS RANGE
FOR CBM64/128
BEYOND
CHALLENGING SOFTWARE
SPY vs SPY
THE ISLAND CAPER
FIRST STAR
SPY vs SPY TM 2 THE ISLAND CAPER
IT'S THE GAME YOU PLAY DIRTY TO WIN!
AMAZING CARTOON STYLE ANIMATION.
SORDERON'S SHADOW
THE FIRST LANDSCAPING
AND TEXT ADVENTURE.
6100 LOCATIONS & 1 KEY AND TEXT
INPUT. 1 PLAYER.
Spectrum
48K plus
BEYOND
CHALLENGING SOFTWARE
SORDERONS SHADOW

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SOUND STUDIO





A simple to use and comprehensive package

- **Music Sales Ltd, 78 Newman St., London W1**
- **Phone 01-636 7777**
- **Price £14.99 (disk)**

Sound Studio looks to be Commodore's best attempt yet at producing a simple-to-use and comprehensive sound and music package. The package on test here is a prototype, but the finished version should be in the shops by the time you read this article.

The package consists of two parts, the sound editor and the sequencer. Once either part has been loaded, the user can flip from one to the other. Whichever part you start with, you get sixty preset sounds to use, with another sixty stored on the disk. The main sound editor panel is laid out in boxes, all relevant functions grouped together within. A large purple arrow operated by a joystick or cursor keys, points to each function in turn for editing. Any of the sixty sounds in memory can be called up and edited, and stored back in memory. Whole sound 'libraries' can be saved to disk for further editing, or for use while composing (more on this later.)

Most of the values displayed on the editor screen are represented by graphic sliders that are adjusted with the cursor keys while you are playing. A second editing screen can be called up, and deals specifically with the filters. All in all, the amount of control you have is quite impressive, and you can see at a glance exactly what's going on.

Flipping into the Music editor (takes about two minutes from disk), you are presented with a system of pop-up menus controlled by the function keys. No auto rhythms are available, but a metronome is provided in the top left of the screen to help you keep time.

Recording, both in real time and step time, is accomplished in true multi-track style. In other words, you can record one track while listening back to a previously recorded track. Three tracks are available normally, but if you are fortunate enough to own a MIDI interface and synth, up to six tracks can be programmed. Tracks entered in real time can be edited from step time page, the note information is presented in the form of a downward scroll within a window, and notes can be entered or edited simple and without fuss.

All in all, it's hard to judge an unfinished program, even when it's in the final stage of completion. All the signs point towards a useful utility for just anyone to own. Check this package out before buying, because they're likely to have added lots more bits since this article was written.

Stave notation	: no
Record modes	: step /real
MIDI	: yes
Edit rhythm	: yes
Load/save	: yes
Printer	: no
Tempo	: yes
Transpose	: no
Tuning	: yes
Edit sounds	: yes
Graphics	: 9
Easy use	: 6

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SOUND EXPANDER



- **Music Sales Ltd., 78 Newman St., London W1**
- **Phone 01-636 7777**
- **Price £99 approx. (disk)**

Commodore's *Sound Expander* cartridge is a brand new device, currently (as I'm writing) still in the final stages of production, so I haven't actually been able to try one out yet. However, an hour spent at Music Sales' office recently provided enough information to whet the appetite.

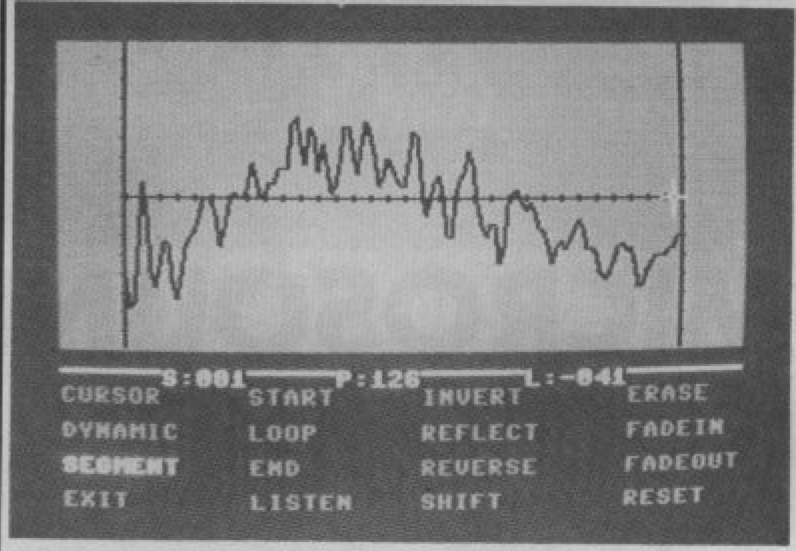
Sound Expander makes use of the currently popular FM (frequency modulation) technology to produce stunningly real sounds using no less than *eight* voices. Thirty preset sounds are loaded in from disc, as is the keyboard and sequencer software. The sounds can't be edited at the moment, the normal ADSR/waveshape system just wouldn't work! The keyboard software is fully compatible with Commodore's lay-over keyboard, and a suitable MIDI interface can be plugged in via a slot in the top of the cartridge.

The software core makes use of the new familiar pop-up menus to access the chord and rhythm generators, real and step time recording etc.

Trust us to bring you the full picture as soon as we've had a chance to play with one!

Stave notation	: no
Record modes	: step /real
MIDI	: yes
Edit rhythm	: yes
Load/save	: yes
Printer	: no
Tempo	: yes
Transpose	: no
Tuning	: no
Edit sounds	: no
Graphics	: 8
Easy use	: 8

SOUND BUGGY



sound parameters can be altered and saved for later use.

- **Syndromic Music, 35a Grove Avenue, London N10**
- **Phone 01-883 1335**
- **Price £99.95**

The Siel Sound Buggy is not only a sound expander but also a sequencer. The hardware is a large black box which offers rhythm, accompaniment and master controls neatly recessed into the top panel. A ribbon cable connects the device to the user port on your 64. A phono socket outputs sound to your hi-fi, with an alternative output from a mini-jack (like the one on your walkman headphones).

Software is available both on tape and disk. The program contains a range of 26 different sounds. Sound parameters for each one can be changed and then stored to tape or disk. You also get a range of 28 rhythms, which can also be edited.

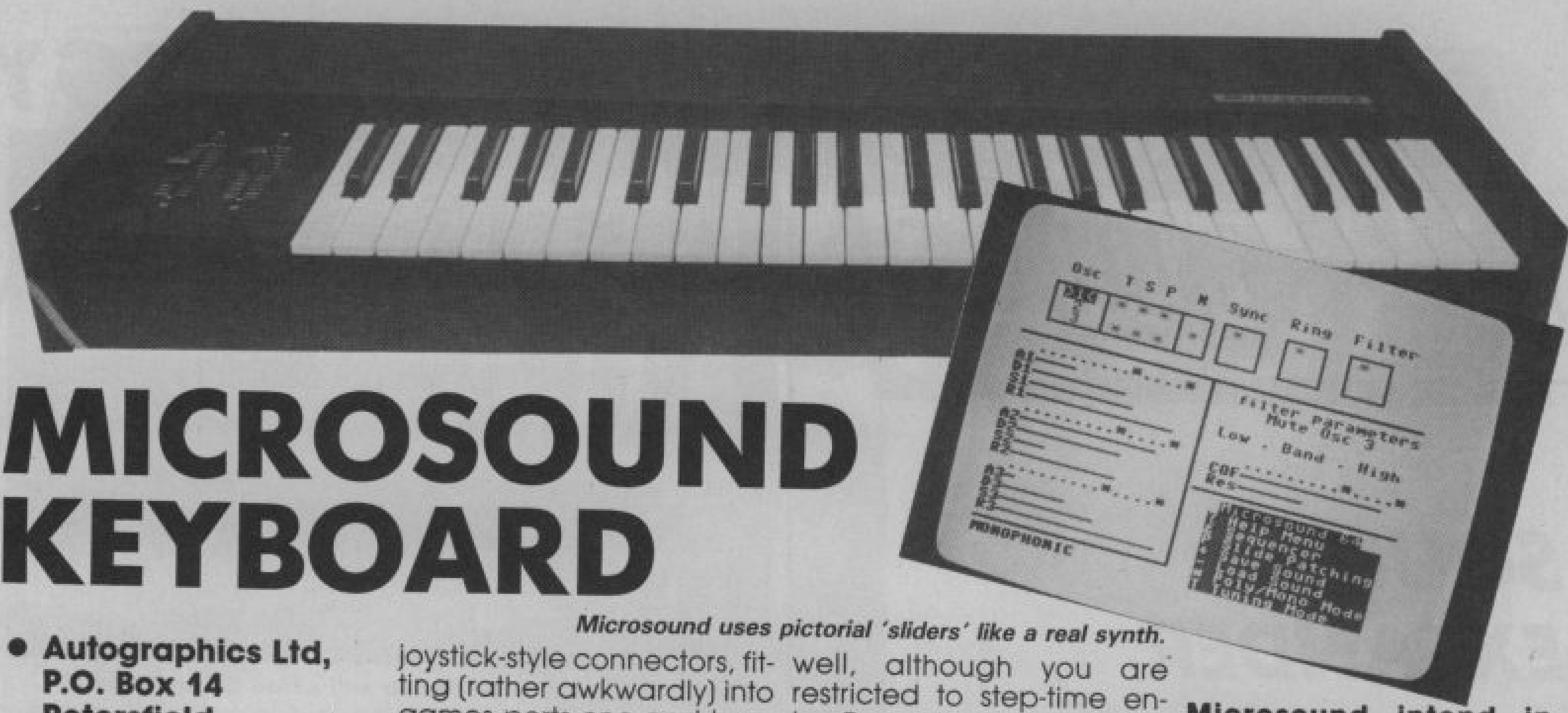
A number of pre-programmed tunes are in evidence complete with chords, bass line and percussion track. Other features include a sequencer and real-time recording, all accessed from the rather cramped main screen.

The pre-programmed sounds were rather disappointing because they didn't resemble anything in particular, so you'll need to do some nifty editing to get good results. Percussion sounds were rather better but, as far as I could see, although you can edit the rhythms, you can't edit percussive sounds themselves.

A manual not yet being available at the time of review, it seems unfair to form any hard opinions, but Sound Buggy definitely looks like having potential, albeit at rather a high price.

Stave notation	: no
Record modes	: step /real
MIDI	: no
Edit rhythm	: yes
Load/save	: yes
Printer	: no
Tempo	: yes
Transpose	: no
Tuning	: no
Edit sounds	: yes
Graphics	: 3
Easy use	: 5





MICROSOUND KEYBOARD

Microsound uses pictorial 'sliders' like a real synth.

- **Autographics Ltd, P.O. Box 14 Petersfield, Hants.**
- **Phone 0730 87403**
- **Price £195**

The *Microsound* is a 49-note, 4-octave keyboard and synthesizer package for the Commodore 64. The biggest part of the package is obviously the keyboard itself, a sturdily built affair in black vinyl covered chipboard. On the left-hand side of the keyboard is a pair of analogue sliders, and connection to the computer is via a pair of joystick-style connectors, fitting (rather awkwardly) into games ports one and two.

The software is provided on disk or cassette, with a loose-leaf manual. This is well written and indexed, with the various aspects of the system dealt with section-by-section.

After loading, you are presented with a sound edit panel, covering all the functions of the SID chip. Once created, a sound can be stored on tape or disk for future use. In this way, a whole library of sounds can be built up and easily accessed.

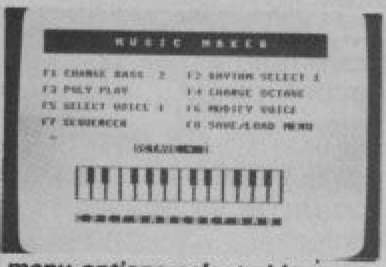
The sequencer part of the software works extremely well, although you are restricted to step-time entry. Record your music one voice at a time, and the notes are displayed on a scrolling chart. At any time you can go back and correct a duff note, and enter the rhythm before going on to enter notes for the next voice.

The analogue sliders to the right of the keyboard can be patched to operate a variety of functions, such as pitchbend, vibrator, filtering etc, depending on how you set up your sound.

The Microsound keyboard is designed with expansion in mind, Microsound intend including sampling and MIDI extensions to the base system. This is probably the best 64-dedicated keyboard around.

Stave notation	: yes
Record modes	: step
MIDI	: no
Edit rhythm	: yes
Load/save	: yes
Printer	: no
Tempo	: yes
Transpose	: yes
Tuning	: no
Edit sounds	: yes
Graphics	: 4
Easy use	: 8

MUSIC MAKER 1



menu options selected by function keys.

- **Music Sales Ltd, 78 Newman Street, London W1**
- **Phone 01-636 7777**
- **Price £14.99 (tape or disk)**

Commodore's *Music Maker* kit contains a 24-note overlay plastic keyboard, a program disk or cassette, and a brief manual. The keyboard offers a brilliant alternative to the expensive, professional stuff, with the advantage of having no electrical connection to the computer.

This ingenious device sits on top of your 64 keyboard, the action of pressing a keyboard key is transferred to the 'qwerty' key underneath.

The software is fairly straightforward, and you should find it easy to get to grips with. Most of the functions and operations are selected from the function keys, accessible through a cut-out in the overlay keyboard. The screen displays the various modes at the top, while the notes scroll across the stave as you play.

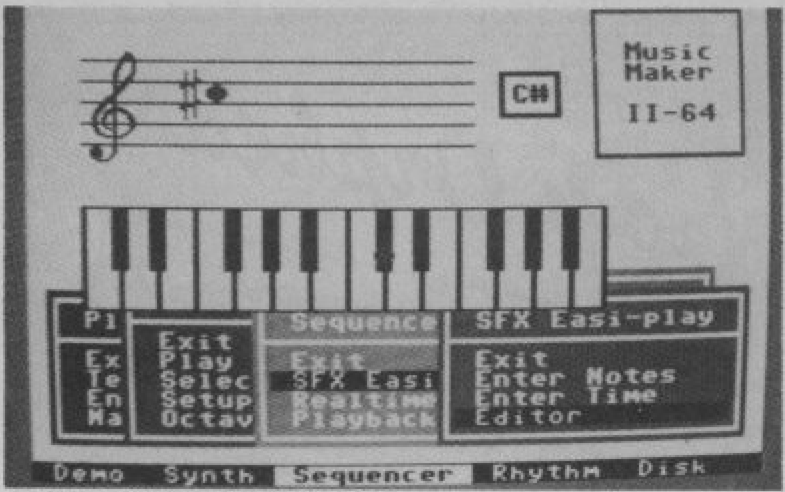
As editing of your music is restricted to deleting the last note played, you can't go back and correct a note in the middle of a composition. At this point, all the notes are assigned the same lenght, but selecting the 'time' option allows you to tap in the rhythm on any key. When you are satisfied with the rhythm you can play back the whole sequence in full.

Load and save options are provided, and a number of rhythm and bass accompaniments are also thrown in to let you produce a really polished performance.

In conclusion, an excellent package aimed at making music simple. The overlay keyboard is definitely a winner; especially when you consider the price of the overall package.



Stave notation	: yes
Record modes	: step
MIDI	: no
Edit rhythm	: yes
Load/save	: yes
Printer	: no
Tempo	: yes
Transpose	: no
Tuning	: no
Edit sounds	: no
Graphics	: 8
Easy use	: 6



pop-up menus make playing easy.

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MUSIC MAKER II

- **Music Sales Ltd; 78 Newman Street, London W1**
- **Phone 01-636 7777**
- **Price £14.99 (tape or disk)**

You will probably find the follow-up to Commodore's Music Maker I a lot simpler to use. Gone is the scrolling stave and tricky editing. Instead, *Music Maker II* has been geared to easy use rather than spectacular results. The familiar overlay keyboard is still in evidence, with a professional model being promised for '86.

The software is so easy to use that you will probably throw the manual out without even reading it. The screen is divided into roughly three parts, the top third given over to the stave section. Under this is a graphic representation of the Music Maker keyboard, with the pop-up menus popping up all over the lower third of the screen.

The 'demo' menu offers a choice of three popular tunes, and allows you to play your own melodies instead of the originals. As the music plays, the various notes are shown on the stave, their colour indicating which voice is playing which note.

The 'synth' menu offers you the opportunity to play all by yourself (if you feel up to it), and you can even play three notes at the same time. Ten sound presets are available, none of them sound like anything in particular, and you must fiddle around with ADSR envelope values to alter the sounds.

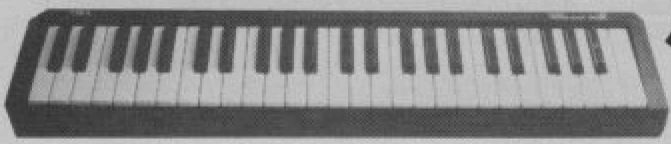
The sequencer menu offers two recording modes, 'easy-play' lets you play in all the notes of your composition without having to think about the rhythm. When you have all the notes in, you simply tap any key to produce the rhythm of your choise and when you play it back, (hopefully), all the notes are in the right places. Realtime recording is just that. Whatever you play is recorded just as it would be on a tape recorder. No editing facilities are offered, but finished compositions can be saved onto tape or disk.

The accompaniment menu allows you to select a rhythm, with or without a bass line, and adjust the tempo to suit. The accompaniment is played (or not, as you choose) when you are in either reecord mode, and the overall effect is quite impressive.

Overall, a neat package aimed at those who just want to have fun with music without taking things too seriously.

Stave notation	: yes
Record modes	: step /real
MIDI	: no
Edit rhythm	: yes
Load/save	: yes
Printer	: no
Tempo	: yes
Transpose	: no
Tuning	: no
Edit sounds	: yes
Graphics	: 8
Easy use	: 10

SIEL CMK49 KEYBOARD



- **Syndromic Music 35a Grove Avenue, London N10**
- **Phone 01-883 1335**
- **Price £125**

The *Siel CMK49* is a very versatile external music keyboard for the Commodore 64 and 128, which comes complete with it's own synth software on cassette or disk. As with most of the Siel products, MIDI functions are built in, but require the Siel MIDI interface present fo these functions to work.

On loading the software, you are offered the choice of creating your own sounds, or loading the set of forty preset sounds provided with the package. Some of the sound sets use all three voices to create highly complex sounds, while others only use one voice leaving the other two free for you to add your own melodies. All the preset sounds can be modified, so the range of sounds available is limited only by your imagination.

The keyboard itself covers 49 notes (4 octaves), and is enclosed in a rigid grey plastic case. It has an 'expensive' feel to it, not unlike the keyboards of synths costing much more. I found it very comfortable to use. A length of ribbon cable protruding from the rear is terminated in a two-way connector. When plugged into the 64, the cartridge socket is reproduced to allow connection of the Siel MIDI interface.

The package comes with a difficult to follow multilingual manual of about thirty pages length, although only five of these are dedicated to the English user, the rest consists of the same instructions in various European languages. The Italian translation is difficult to come to terms with, and only makes sense if you have the software running in front of you at the time.

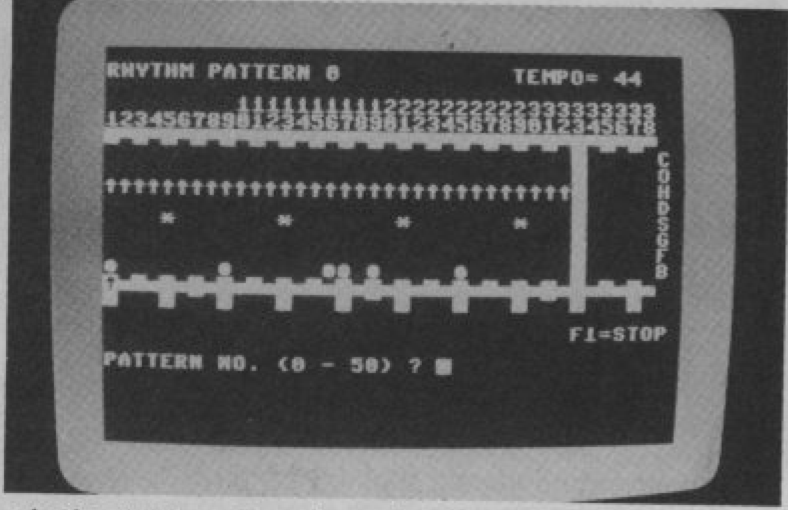
The cassette loads in just under eight minutes, leaving you with various menu options. At this point, you can continue to load the preset sound file, load your previously saved sounds or create a set of sounds from scratch. Any of the sounds loaded into memory can be edited, a simple process despite the complexity of the sounds possible.

Altogether a well thought out package full of professional features and a real keyboard at an affordable price.

Stave notation	: no
Record modes	: step /real
MIDI	: yes
Edit rhythm	: yes
Load/save	: yes
Printer	: no
Tempo	: yes
Transpose	: yes
Tuning	: yes
Edit sounds	: yes
Graphics	: 4
Easy use	: 7

SYNTRON DIGIDRUM





selecting rhythm patterns for each of the eight drums on right of screen.

- **Syntron Digidrum**
- **c/o Vince Hill Assocs**
- **35a Grove Avenue, London N10**
- **Phone 01-883 1335**
- **Price £65 £16.50 (soundset disk)**

Not really a sampler, but a drum machine that uses sampled sound. *Digidrum* gives you everything you need to set up a studio-quality drum synthesiser. The hardware consists of a cartridge with a jack socket for sound output to an amplifier (you can't output to a TV). There's also a phono socket that produces a synchronisation pulse for other equipment. Software comes on disk — tape will soon be available.

The software is menu driven and consists of main driver program, quick loader and a couple of sound and rhythm files. Options include those for programming patterns, composing songs and loading and saving either sound creations or presets.

Standard sounds are: cymbal, open and closed hi-hat, three tomtoms, snare and bass drum. Up to eight sounds can be preset at one time. Selecting 'program rhythm patterns' lets you view any of the 52 possible pattern shapes. These are displayed as bar-charts with symbols for each of the eight drum sounds. The cursor sets the step to be programmed, whilst pressing the first letter of the drum you want, sets the step to that sound. It's as simple as that.

Syntron has also produced a double-sided disk with a huge range of alternative sound samples, everything from cymbals to cowbells, rimshots, rattlesnakes and a nice assortment of latin percussion sounds. More disks should be available as well as a facility to sample your own sounds.

Digidrum represents outstanding value for money when compared with similarly priced drum machines. It scores again with its 'real' sounds and it's pretty easy to use.

Stave notattion	: no
Record modes	: step
MIDI	: no
Edit rhythm	: yes
Load/save	: yes
Printer	: no
Tempo	: yes
Transpose	: n/a
Tuning	: n/a
Edit sounds	: no
Graphics	: 7
Easy use	: 8

SOUND SAMPLER



- **Music Sales Ltd, 78 Newman Street, London W1**
- **Phone 01-636 7777**
- **Price £69.99 (disk)**

The *Commodore Sound Sampler* is definitely a product of ultra-posh technology. Priced at under £70, I must admit I wasn't expecting much. But I must concede, it did everything I was told it would, and still had some tricks up it's sleeve!

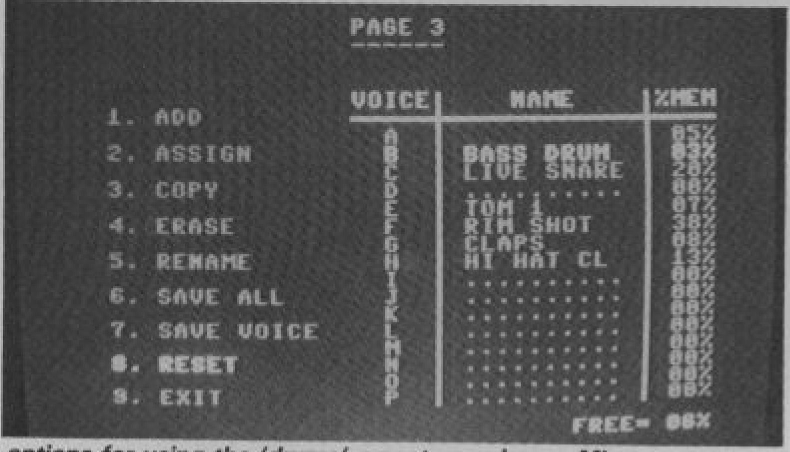
The hardware consists of a larger than usual cartridge, a cheap cassette-type microphone, and a cable to connect to the audio socket on your 64. This is provided as an alternative to connecting the sampler to your hi-fi, and the sound is reproduced through your TV speaker.

When everything was connected up (not easy as the microphone and output sockets are labelled *underneath* the cartridge) you can load the software from disk and examine the options laid out on the opening menu. As with Commodore's more recent software, all menu opting is done with the function keys and takes a bit of getting used to.

The 'sample' menu provides a moving barchart representing the sound coming in from the microphone. Above the bar is a red blip that hangs about a bit longer than the bar itself, and gives a more easily read 'peak' level. Selecting the 'sample' option again from the menu on the right hand side of the screen starts the mechanism going, although nothing happens until you start to speak.

When you do, the screen blanks for about one and a half seconds and returns to

64 SOUND GUIDE



options for using the 'drums' preset samples on Microvox.

MICROVOX DIGITAL SOUND SAMPLER

- **Supersoft, Winchester House, Canning Road, Wealdstone, Harrow, Middx.**
- **Phone 01-861 1166**
- **Price £229 (disk only)**

Microvox is best described as a digital sound editor. At around £230, it's intended more for professional use than the home.

The package arrives in three separate bits. The guts of the system comes in a neat hammered finish blue and beige metal case about the size of a standard dictionary. The front panel offers an input jack socket, input gain control, repeat, mix and output level controls, and an output jack socket. The rear panel is slightly less interesting, featuring MIDI in and out sockets, a power socket, and a ribbon connector socket.

There's also a regular 64-type cartridge sporting about two feet of ribbon cable, mains power supply, a floppy disk and a manual. Assembling the gathered hardware is pretty simple, although you'll need to make up a cable to connect to an external amplifier. The software is entirely menu driven and you select menu options either with a joystick, or by using the function keys. The screen colours are a sensible green on grey, with white highlights.

Any sounds can be recorded in, for example: hitting an empty bottle or kicking the cat. Then you use the editor screen to select the exact portion of the sound you wish to use. The edited sample can then be assigned to one of 16 voices and played back using the 'qwerty' keys, or a MIDI keyboard. Record in four or five samples, and use the built in sequencer to play back a drum beat, or a melody.

The length of sample time available varies from just over half a second up to 17 seconds, depending on the bandwidth gives the best sound, but a narrow bandwidth permits longer samples to be recorded. Up to sixteen sounds can be stored in memory at any one time, but as you record and edit each sound, the length of that sample is deducted from the remaining sample time. One long sample or sixteen short ones, it's up to you.

The disk options menu has the full complement of load, scratch and format commands, and produces a directory every time you call the disk menu. Saving a sample is done from the voice handler menu and one or all of the sounds can be saved off. The program disk contains two complete drum kit samples, and a demo rhythm file, as well as some unusual sounds.

The MIDI hardware is built in, so you don't need to buy an expensive interface to hook up to drum machines, sequencers, synths etc; and the MIDI options menu allows you to set up for the kind of MIDI equipment you intend using.

To put Microvox to the ultimate test, I lugged it down to a commercial recording studio where it put some very sophisticated (not to mention expensive) digital gadgetry to shame! The sound quality is superb, the software very easy to use and the hardware neat and efficient. What more could you want?



Microvox is not a toy. £229 is a lot of money to shell out, but if you're in a band or just out to make lots of funny noises, Microvox is well worth looking at — Feargal Sharkey bought one, anyway.

Stave notation	: n/a
Record modes	: step /real
MIDI	: yes
Edit rhythm	: yes
Load/save	: yes
Printer	: no
Tempo	: yes
Transpose	: yes
Tuning	: no
Edit sounds	: yes
Graphics	: 10
Easy use	: 10

the same screen as before. Now, if you press any of the top two rows of the 64's keys you will hear your voice replayed at different pitches.

Other menu functions from this page cater for viewing and editing the complex wave shapes and envelopes to leave just the bit of sound you want. Once stored on disk, you can play tunes from the keyboard using your voice as a musical instrument, sequence some unusual rhythms, or go on to record in other sounds.

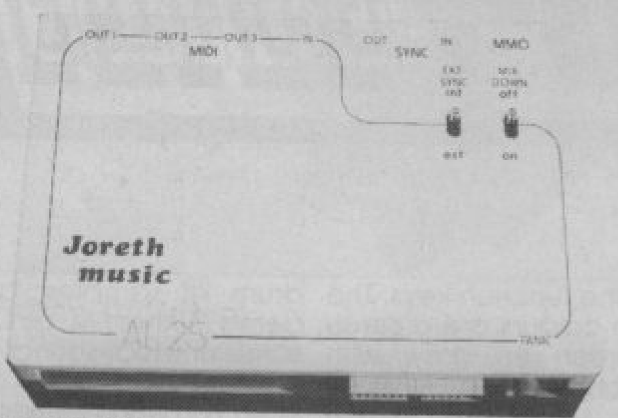
From the main menu again, you can try out some of the other exciting effects on offer, such as the pitch bend (make anything you say sound like Mickey Mouse or sing in harmony with yourself etc.). By comparison, the echo and reverb effects sound almost tame. By the way, a MIDI function is included — you plug your MIDI interface into the cartridge slot in the top of the sampler itself.

At less than £70, I shouldn' really complain about the sound quality, but the noise produced by the 64's video circuits is rather to prominent too make this sampler suitable for professional use. None the less, I had great fun with it and I would recommend checking it out next time you feel like a change from zapping or exploring caverns.

Stave notation	: n/a
Record modes	: step
MIDI	: yes
Edit rhythm	: yes
Load/save	: yes
Printer	: no
Tempo	: yes
Transpose	: yes
Tuning	: yes
Edit sounds	: yes
Graphics	: 4
Easy use	: 8

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JORETH A25 MIDI SYSTEM



- **Joreth Music, PO Box 20, Evesham, Worcs WR11 5EG**
- **Phone (0386) 831615**
- **Price £244.90**

The Joreth Composer System comes across as the Rolls Royce of sound on the 64. Priced at just under £245 it's certainly not a toy, in fact a professional MIDI composer system covering just about all aspects of synthesizer control.

The basic package performs real-time and step-time recording and editing with no fuss or bother, and handles 8 MIDI tracks and more than 6000 'events' (notes and rests to you and me). Full stave notation is featured, as well as four other listing modes.

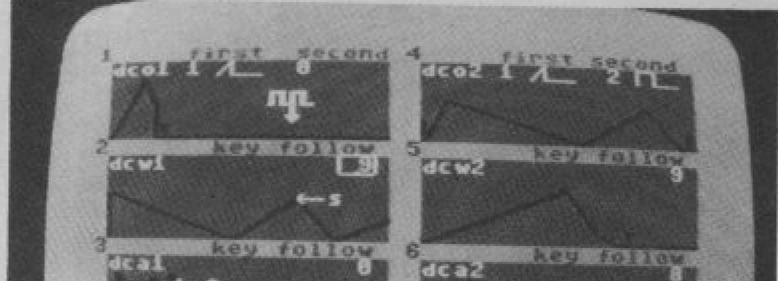
Dumping scores to printer is another important feature, and I'm glad to say Joreth have got it right. Printers catered for include Commodore's MPS801, Star SG10C, and Epsons with a suitable graphics interface. Commodore's new colour printer, the MCS801 is also covered.

The hardware has everything you would expect including full MIDI and non-MIDI sync (both ways), MIDI in, out and through, a socket for a footswitch (makes 'drop-ins' easier) and a panic button that does a 'warm start' leaving the machine clean but without losing the program or the score you are working on.

Other software currently in this series includes a tone editor for the Casio CZ range, a real-time part loader, and a key programmer.

To sum up, this is probably the best (and the most expensive) MIDI system around for the 64.

Stave notation	: yes
Record modes	: step /real
MIDI	: yes
Edit rhythm	: yes
Load/save	: yes
Printer	: yes
Tempo	: yes
Transpose	: yes
Tuning	: n/a
Edit sounds	: n/a
Graphics	: 8
Easy use	: 9



tone edit screen on the Joreth MIDI system.

SIEL MIDI SYSTEM

- **Syndromic Music, 35a Grove Avenue, London N10**
- **Phone 01-883 1335**
- **Prices:**
  Interface £99
  Composer (d) £39
  (c) £36
  Sequencer (d) £69.50
  (c) £64



The Siel MIDI System is based around the interface itself. The case is black and about the size of a box of chocolates. It connects to the 64 via a foot of ribbon cable and a cartridge port connector. On the front of the box is a solitary green power indicator, while the rear sports three MIDI out sockets, Control in, MIDI in, and MIDI through. No real problems here, but a non-MIDI sync would have been useful.

Two software titles are available at the moment, a composer/arranger package, and a sixteen track real-time recording package. The composer/arranger software is a rather sorry affair. Written in Basic, this program offers step-time entry and editing of up to 1500 'events' on each of six voices. Entering note information is rather tedious but if you persevere, good results can be produced.

The sixteen track sequencer is a bit more interesting. Record in real-time, edit in step time to produce perfect MIDI masterpieces.

Before rushing out to buy a MIDI system for your 64 (or the other way around), take a careful look at the software available and the extent of the manufacturer's backup service.

Stave notation	: no
Record modes	: step /real
MIDI	: yes
Edit rhythm	: n/a
Load/save	: yes
Printer	: no
Tempo	: yes
Transpose	: yes
Tuning	: n/a
Edit sounds	: n/a
Graphics	: 2
Easy use	: 3

Twelve steps to software selection

Stave notation:
Does the software display the music on a proper musical stave? yes/no.

Record modes:
Enter notes one by one, in real time, or both.

MIDI:
Does the package offer MIDI facilities? yes/no.

Edit rhythm:
Can you enter the rhythm by tapping it out on the keys or changing the length of a note? yes/no.

Load/Save functions:
Can you save off your sounds/ music to tape, disk or either?

Printer:
Can musical notation be dumped to a compatible printer? yes/no.

Tempo:
Can the tempo be adjusted while the music is playing? yes/no.

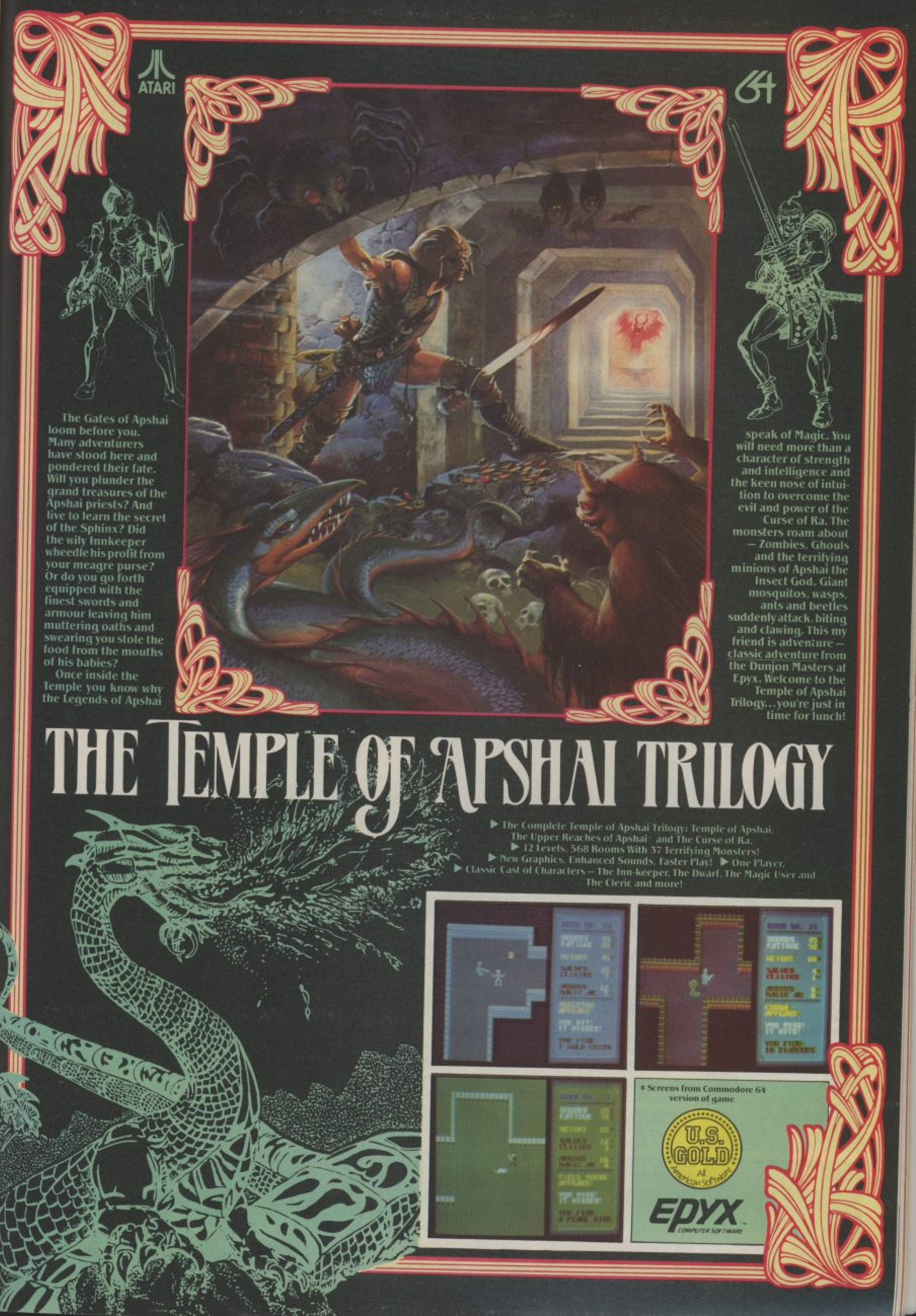
Transpose:
Can the music be played back in a key other than that it was written in? yes/no.

Tuning:
Can the pitch be tuned up or down to match that of other instruments? yes/no

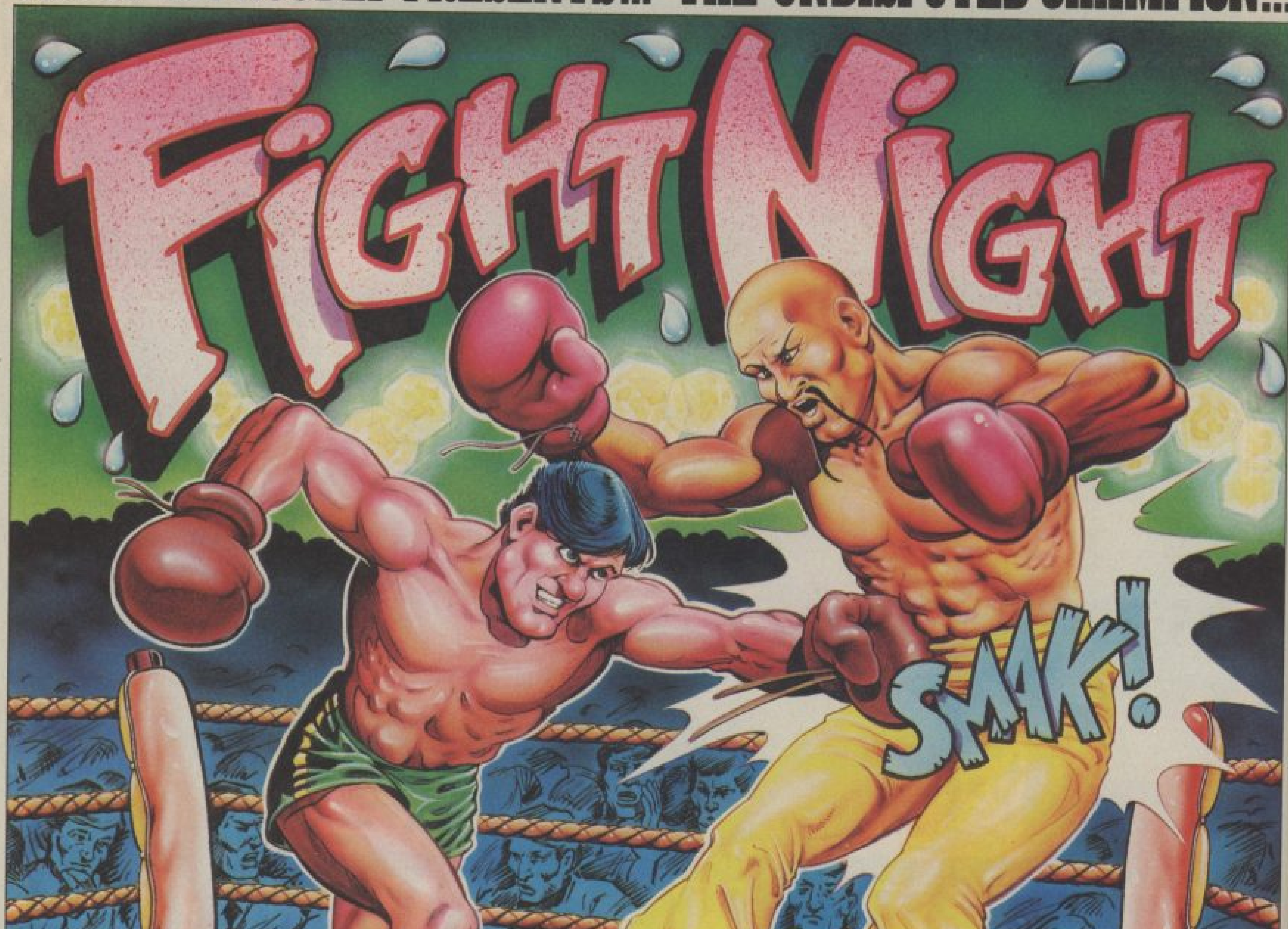
Edit sounds:
Can the sound(s) be created, modified and saved? yes/no

Graphics:
Marks out of 10 for visual presentation.

Easy use:
Marks out of 10 for ease of use, including instruction presentation.


ATARI
64
The Gates of Apshai loom before you. Many adventurers have stood here and pondered their fate. Will you plunder the grand treasures of the Apshai priests? And live to learn the secret of the Sphinx? Did the wily Innkeeper wheedle his profit from your meagre purse? Or do you go forth equipped with the finest swords and armour leaving him muttering oaths and swearing you stole the food from the mouths of his babies?
Once inside the Temple you know why the Legends of Apshai speak of Magic. You will need more than a character of strength and intelligence and the keen nose of intuition to overcome the evil and power of the Curse of Ra. The monsters roam about – Zombies, Ghouls and the terrifying minions of Apshai the Insect God. Giant mosquitos, wasps, ants and beetles suddenly attack, biting and clawing. This my friend is adventure – classic adventure from the Dunjon Masters at Epyx. Welcome to the Temple of Apshai Trilogy...you're just in time for lunch!
THE TEMPLE OF APSHAI TRILOGY
▶ The Complete Temple of Apshai Trilogy: Temple of Apshai, The Upper Reaches of Apshai and The Curse of Ra.
▶ 12 Levels, 568 Rooms With 37 Terrifying Monsters!
▶ New Graphics, Enhanced Sounds, Faster Play! ▶ One Player.
▶ Classic Cast of Characters – The Inn-keeper, The Dwarf, The Magic User and The Cleric and more!
* Screens from Commodore 64 version of game
U.S. GOLD
All American Software
EPYX
COMPUTER SOFTWARE

M'LORDS, LADIES, & GENTLEMEN... FRESH FROM AMERICA
U.S. GOLD PROUDLY PRESENTS... THE UNDISPUTED CHAMPION...





From time to time a software title is released, so innovative that it breaks new ground in graphical and technical achievement — Fight Night, the first animated simulation on the C64 is more than a game, more than a simulation — it is a revelation!

"It has class, it has style — forget the rest, Fight Night is quite simply the absolute best." — Tony Takoushi Computer & Video Games/Computer Trade Weekly.

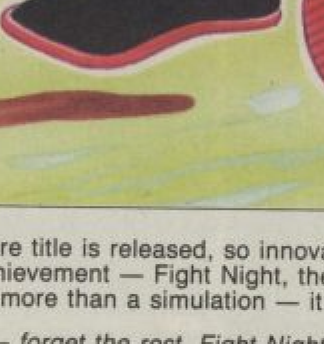
"It's like watching and playing a cartoon computer version of Rocky. Fight Night has pushed the graphical capabilities of the C64 to its utmost limits" — Zzap 64 November.

U.S. GOLD All American Software

Sydney









Available for Commodore 64

Cassette £9.95

Disk £14.95

 US Hotline US Hotline US Hotl

Big Stateside push for Amiga



They do things big in America; so if you've got a big computer you've got to shout about it in a big way. That's why Commodore is spending loads of money letting Americans know about the Amiga. Trouble is, Americans were already nuts about it. Only Dan Gutman's been able to keep his head to send us this special report.



Has the Amiga arrived over there yet? Because over here, it's hit the stores, and it's the hottest thing since . . . well . . . Madonna, I guess. All the computer magazines have put the machine on their covers, all the computer people are buzzing about it, and Commodore is pushing the thing with all the muscle they've got. Just before Christmas they've launched a $40 million advertising campaign that seems to be attracting as much attention as the computer itself.

Now Showing. .

I hear the commercials aren't being shown in England (why not?), so let me describe them to you. The first one has been called *Unbounded*. It starts with a middle-aged guy walking up a flight of stairs into a futuristic-looking room. As soon as he gets into the room, he walks up to a podium with an Amiga on it. You don't see the word "Amiga" or "Commodore" anywhere. There is no voice either.

Suddenly, the guy hits a few keys on the keyboard, and this image of a foetus appears on the computer screen! I suppose Commodore is trying to symbolize that the next generation of computer has been born, but to tell you the truth, the image of a foetus symbolizes "abortion" to me more than anything else.

Regardless, beams of light start flashing all over the place, and the commercial looks like a night out at the Hippodrome. Only when the whole thing is over do you see the words, "The Amiga by Commodore." That's all it says.

It's truly wild, eye-catching, intruiging, and weird, especially when you compare it to most computer advertising. A few years ago, Commodore ran commercials of college kids gloomily coming home from school because they weren't computer literate. Now it looks like Commodore is aiming for the dreamy, symbolic imagery that has worked so well for Apple in the past. Apple's "1984" commercial that introduced the Macintosh is one of the most famous commercials ever in the U.S. They spent a million dollars on it, and they only showed it once — in the middle of the Super Bowl.

Baby Boomers

The second Amiga commercial that Commodore has prepared is a bit more traditional, but equally interesting. This one is called "Boomers" (for Baby Boomers). We see a montage of black and white stock footage from the 1950's — schoolchildren in classrooms, kids running races, that sort of thing. The narrator says, "You've always had a lot of competition. Now you can have an unfair advantage." After the black and white film is finished, the commercial ends with some of the startling 1980's quality computer graphics the Amiga can produce. It pretty much rips your eyeballs out, if you ask me.

This one seems to be aimed at the Yuppie ("young urban professionals") crowd, who are somewhat similar to what you folks call middle-class trendies. Young people from 25-35 who have good jobs, make a lot of money, and want the finer things in life. The Baby Boom Generation (anybody born between the end of World War II and 1960) is the largest segment of the American population. American culture has always revolved around this group.

Three-horse Race

It's still too early to tell if Amiga is going to be a success over here. There's a horse race going on between Apple, Atari and Commodore. The Mac has established itself, but it's still stuck with that black and white screen. Most folks over here agree that the Amiga blows Macintosh out of the water, but Amiga is still pretty expensive, and Commodore has been forced to position it as a business computer (which it isn't).

Little Atari has risen from the ashes with a surprising machine — the 520 ST — which is selling like crazy, mostly because it's half the price of the Macintosh or Amiga. I'm writing this before the wild Christmas selling season begins, and I should know a lot more after the dust settles.

On the software front, Commodore held a conference for Amiga software developers recently, and more than 50 companies showed up. The biggies — *Electronic Arts, Broderbund, Mindscape* and *Infocom* — have all announced that they'll have Amiga software out soon. In general, computer programmers are drooling over this machine more than any other.

Because of its sound and graphics capabilities, musicians, artists and graphic designers are also lining up to try the Amiga. As one programmer told me, "Amiga can walk and chew gum at the same time." I'll keep you posted on how the machine is doing over here. □

Commodore 64 Chart

Chart Chat

Well, we've done it again. Last month we predicted stardom for *Winter Games*, the game that knocks the icicles off your joystick. And there it is, straight in at Number One in both the 64 and the General Chart. With *Monty on the Run* running not far behind. It looks as though *Frank Bruno's* finally got the KO treatment. New arrival, *Fighting Warrior*, also looks like a bubbler.

Now it's crystal ball time: this month's Screen Star, *Rambo*, is set to blast his way straight to the top, pursued by *Superman* (despite our damning review this month). And watch out for *They Sold a Million* — this one probably will. Could it be this year's biggest stocking filler?

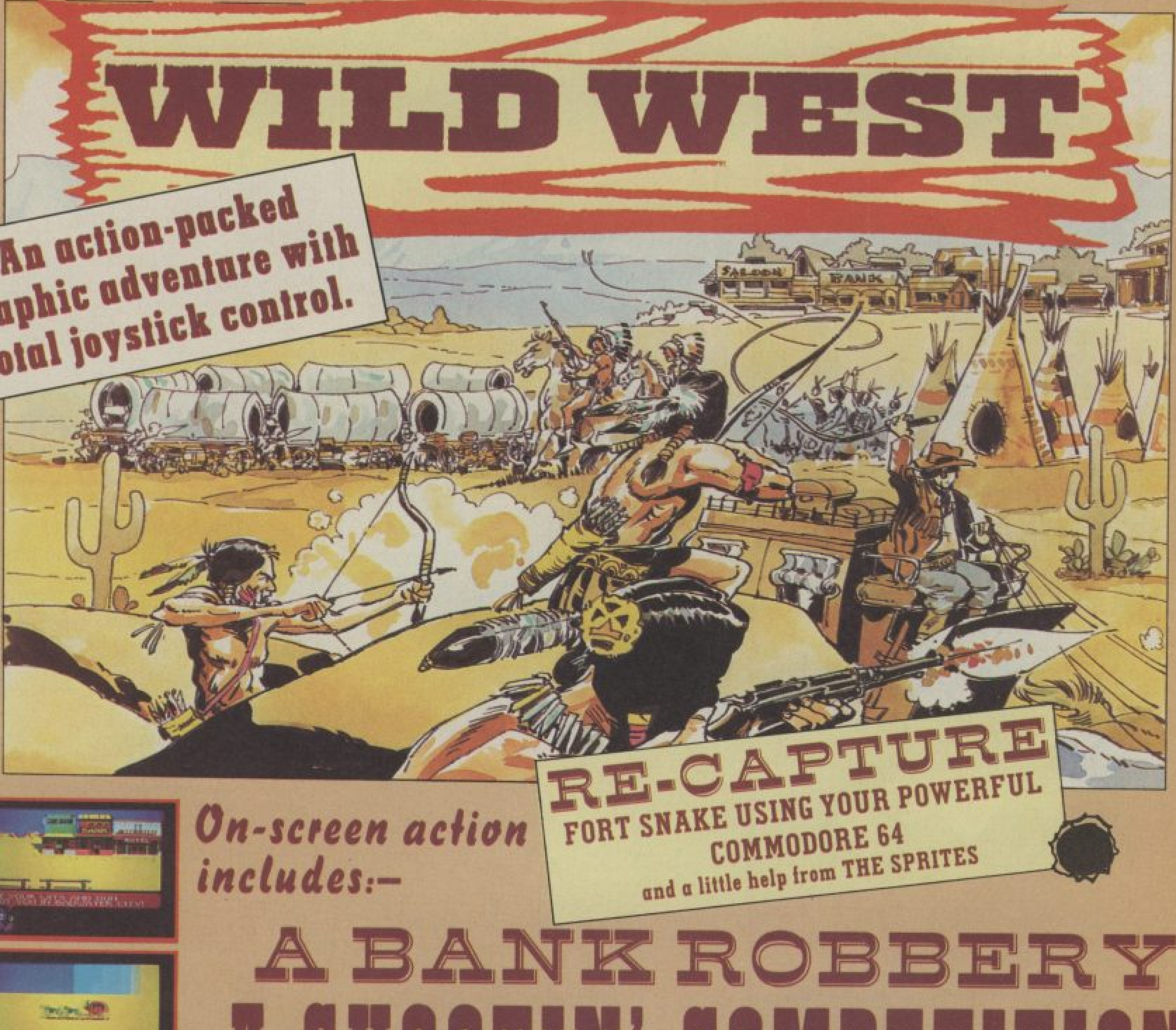
Chart compiled for Commodore User by Gallup/Microscope, the UK's number one games chart.

NEW	Winter Games	US Gold
NEW	Monty On The Run	Gremlin Graphics
3	Who Dares Wins 2	Alligata
4	Summer Games 2	Epyx/US Gold
5	Way of the Exploding Fist	Melbourne House
6	Kik Start	Mastertronic
7	Action Biker	Mastertronic
NEW	Fighting Warrior	Melbourne House
9	Frank Bruno's Boxing	Elite
10	Beach Head 2	Access/US Gold
NEW	Racing Destruction Set	Ariolasoft
12	Barry McGuigan World Cham.	Activision
13	BMX Racers	Mastertronic
14	Paradroid	Hewson Consultants
15	Sky Fox	Ariolasoft
16	Finders Keepers	Mastertronic
17	Karateka	Ariolasoft
18	Spy vs Spy 2	Beyond
19	Elite	Firebird
NEW	Last V8	Mastertronic

General Chart

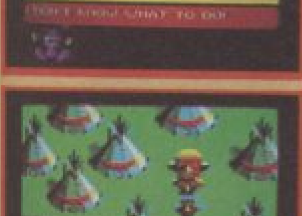
NEW	Winter Games	US Gold
NEW	Monty On The Run	Gremlin Graphics
NEW	Elite	Acornsoft/Firebird
4	Way of the Exploding Fist	Melbourne House
5	Formula One Simulator	Mastertronic
6	Finders Keepers	Mastertronic
7	Frank Bruno's Boxing	Elite
8	Fighting Warrior	Melbourne House
NEW	Impossible Mission	Epyx/US Gold
10	Action Biker	Mastertronic
NEW	Computer Hits (10)	Beau Jolly
12	BMX Racers	Mastertronic
13	Daley Thompson's S/Test	Ocean
14	Hacker	Activision
15	Starquake	Bubble Bus
NEW	Who Dares Wins 2	Alligata
NEW	They Sold A Million	Hit Squad
NEW	Chiller	Mastertronic
19	Beach Head	Access/US Gold
NEW	Fairlight	The Edge

WANTED
(DISK OR CASSETTE)

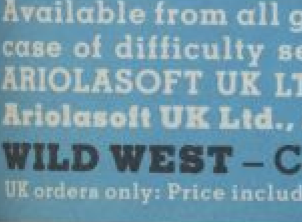


An action-packed graphic adventure with total joystick control.

RE-CAPTURE
FORT SNAKE USING YOUR POWERFUL
COMMODORE 64
and a little help from THE SPRITES







On-screen action includes:–

A BANK ROBBERY
A SHOOTIN' COMPETITION
A RODEO RIDE

Plus a cast of thousands including cowboys, indians, outlaws and pioneers.

REWARD
hours and hours of all-action fun amidst incredibly accurate graphic images of the Old West.

GET 'WILD WEST' – OUT NOW ON DISK OR CASSETTE.

Available from all good software retailers – if it's not there, please order it – or in case of difficulty send your crossed cheque/P.O. made out to ARIOLASOFT UK LTD., including your own name and address, to **Ariolasoft UK Ltd., Asphalte House, Palace Street, London SW1E 5HS.**

WILD WEST – Commodore 64 Cassette £9.95 Disk £12.95

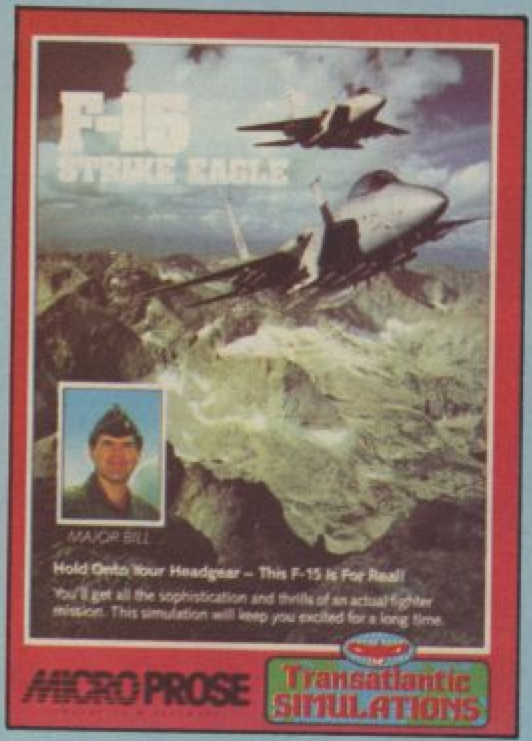
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Strap yourself into your ejection seat and get ready for modern jet fighter combat with F-15 Strike Eagle!! F-15 features superb Three-Dimensional graphics, F-15 manoeuvrability, computer assisted targeting including a modern fighter HUD (Heads Up Display), airborne radar, air-to-air missiles, surface-to-air missile defence, ground target bombing, full aerobatics, and multiple combat scenarios. F-15 will thrill and challenge you and give you the chance to

The action s



F-15 STRIKE EAGLE

prove you have the "Right Stuff" of an EAGLE fighter pilot!!

F-15 COMPARISON		
Feature	"Real" F-15	F-15 Strike Eagle
1. Multiple Weapon Systems		
• Cannon	Yes	Yes
• MK-82 Bombs	Yes	Yes
• Air-Air Missiles	Yes	Yes
2. Sophisticated Electronics		
• Heads Up Display	Yes	Yes
• Radar	Yes	Yes
• Electronic Counter Measures	Yes	Yes
• Inertial Navigation	Yes	Yes
3. Real Combat Missions	Yes	Yes
4. Developed and tested by Real Fighter Pilots	Yes	Yes
5. Aerobatic Flying (Loops, Splits and Yo Yos)	Yes	Yes

C-64/128 & Atari Cassette	£14.95
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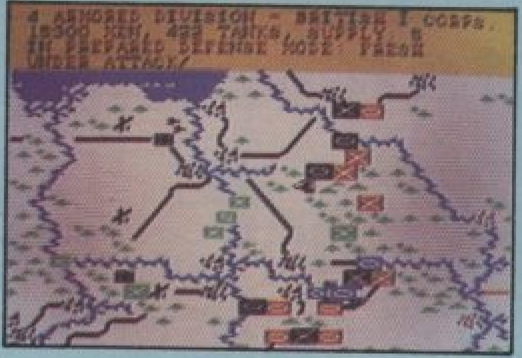


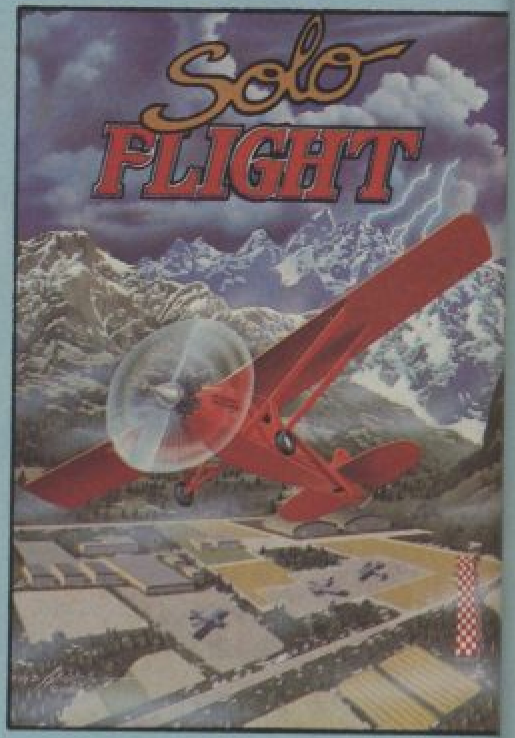


NATO-COMMANDER

Pin on the four stars of a Nato General and defend Europe in a heart pounding, accelerated Real-Time war simulation! React to the combat radio, teletype, and news service messages from the battle front, and use your full continent scrolling battle map to deploy, manoeuvre, and command the battle units, including infantry, armour, helicopters, air forces, and tactical nuclear weapons in real time to stop the ever advancing Warsaw Pact battle units! Nato Commander is great fun and challenge for wargamers and arcaders alike!

C-64/128 & Atari Cassette	£9.95
C-64/128 & Atari Disk	£12.95





SOLO FLIGHT

Solo Flight is an outstanding flight simulator that will provide you with the thrill, excitement and joy of flying your own aircraft. Solo Flight uses superior three dimensional graphics to provide realistic take-offs, landings, and cross country navigation under both visual and instrument flight rules among 21 different airports, in three different geographical areas of the United States. Options include touch and go's, visual or instrument flying, full cockpit instrumentation, dual VOR navigation radios, an instrument landing system (ILS), multiple air navigation maps, four difficulty levels, and emergency procedure practice. In the game mode the player uses his superior skills to deliver the U.S. Mail quickly and safely among the various air fields. This simulation is a realistic trainer and outstanding fun for all ages!

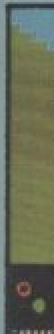
C-64/128 & Atari Cassette	£14.95
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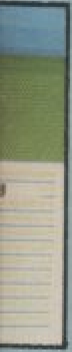
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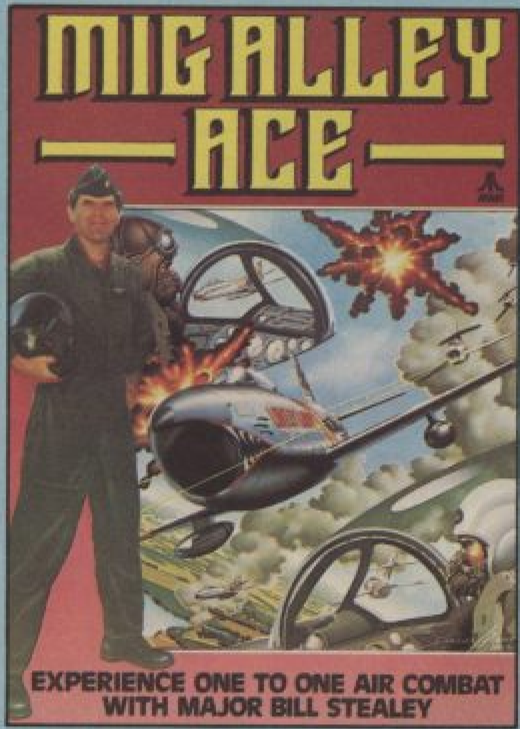
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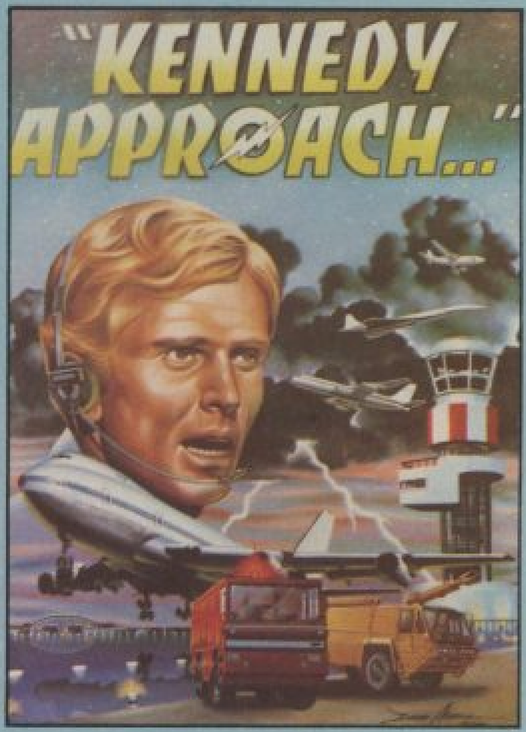
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See, feel and hear all the action!
Kennedy Approach is the FIRST simulation to include realistic high-quality speech right from your computer. Bad weather, in-flight emergencies, instrument failures and other variables provide an ever changing environment. You control the action in the skies of our busiest airports, twenty different aircraft could be calling you at the same time and may be vying for the same runway!







SPITFIRE ACE

Strap on your parachute and man your fighter!! Save London during the Blitz in your Supermarine Spitfire!! Fly loops, Immelmanns, and all the real air-to-air combat manoeuvres using outstanding, out of the cockpit 3-D graphics!! SPITFIRE ACE (European Theatre) provides at least 9 different Combat scenarios and fast paced action that puts you right on the edge of the real personal danger of being shot out of the sky!! For 1-4 players!!

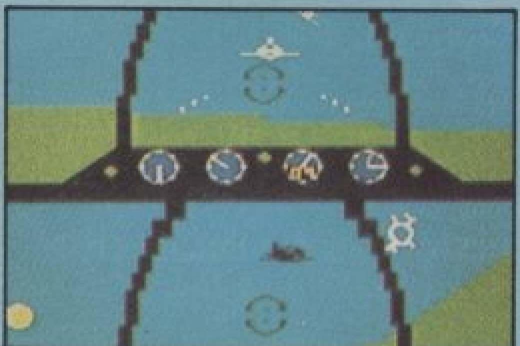
C-64/128 & Atari Cassette	£9.95
C-64/128 & Atari Disk	£12.95



MIG ALLEY ACE

MIG Alley Ace is an exciting and action packed split screen head-to-head aerial combat flying simulation. The game allows two players to fly against each other in their own jet fighter and each receive outstanding graphics and flight information as if they were in the cockpit of their own F-86 Sabre Jet. The game play consists of a series of actual fighter pilot manoeuvres, from loops and High-G turns to Hi-Yo-Yo's, as each player attempts to centre his opponent's aircraft in his gun sights and shoot him down. Additional game options include a solo mode against one to three enemy aircraft, and a co-operative mode where two human players can fly against two computer controlled enemy aircraft. Five actual Korean War scenarios are included, each with five different skill levels. MIG Alley Ace is an outstanding simulation that requires superior fighter pilot skills and guts to survive and win the Silver Wings of a Jet Ace!

C-64/128 & Atari Cassette	£9.95
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KENNEDY APPROACH

You will hear both their radio calls and your broadcast messages in high-quality speech. All commands can be given using the joystick. This simulation is immediately playable and enjoyable. The safety of hundreds of passengers is in your hands as you guide jet airliners, private planes, and even the supersonic "Concorde" to and from their destinations.

ARE YOU READY TO TAKE CONTROL . . .
YOU'LL BE GLAD WHEN THIS SHIFT IS OVER!!!

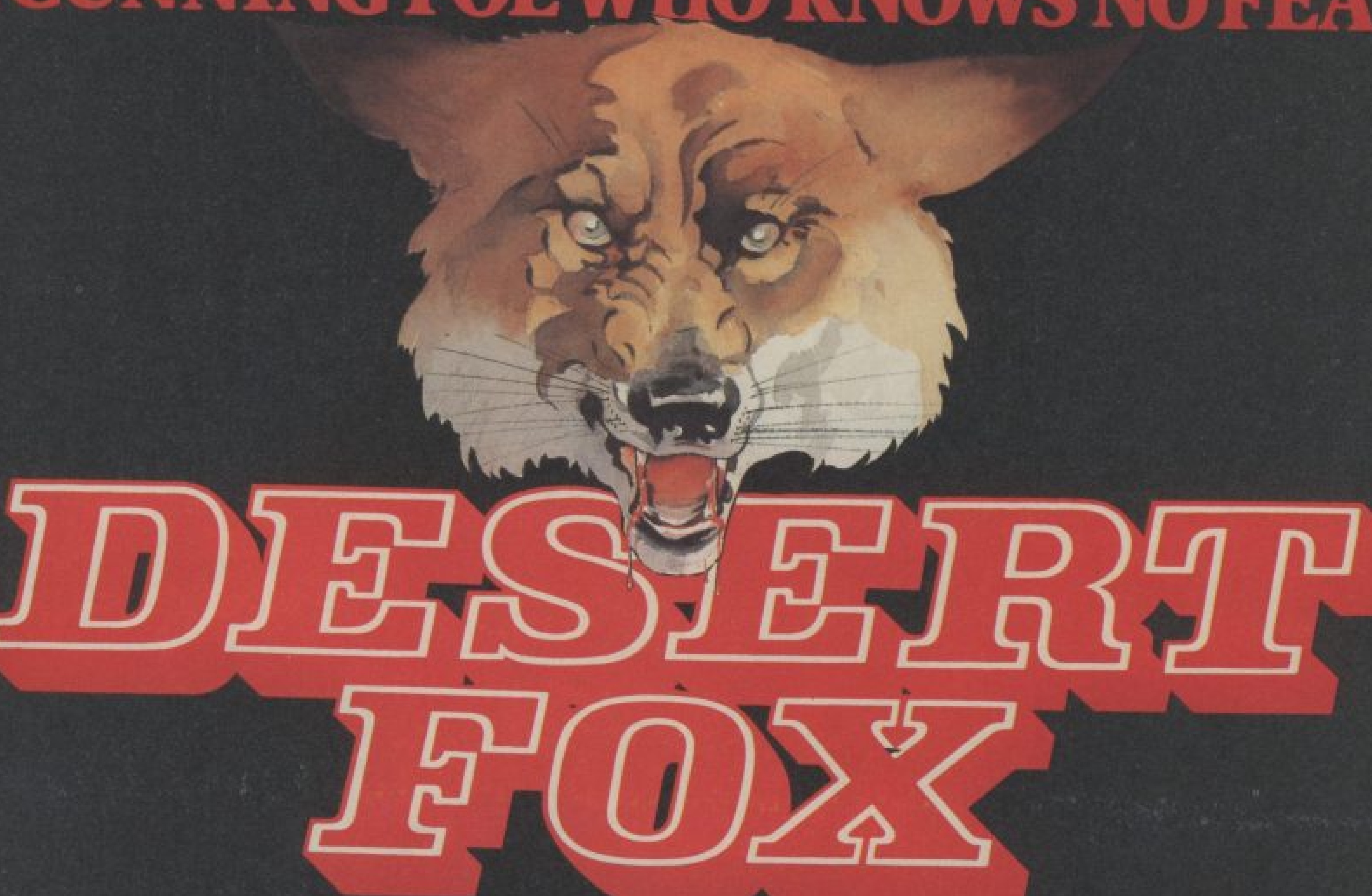
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nent is REAL!

Transatlantic SIMULATIONS

A CUNNING FOE WHO KNOWS NO FEAR





CBM64/128

The cunning Desert Fox, the wily Rommel, is on the rampage, sweeping across the desert sands, laying low the allied forces and swarming through allied territory. It is on your shoulders Lone Wolf, to halt the progress of this awesome foe and rescue the North Africa campaign from his grasp. Step forward with the courage of a fearless leader in face to face conflict with his ground and air attacks. Be as wise and as cautious as the most battle hardened general in planning your strategy and calculatin your tactics to rescue your supply depots. In short Lone Wolf, if you fail in your destiny as the complete warrior, the final conflict – a head to head tank duel with the mighty Desert Fox himself – will be your last.

REALISTIC VOICE SIMULATION

Listen in on enemy radio messages, plan your tactics to combat their manoeuvres.



Stuka attack: Keep a close eye on your radar, an early warning will give you some chance against the enemy stuka attacks

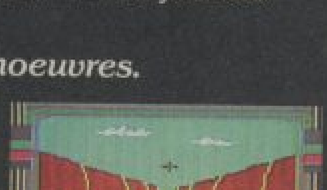


Convoy: Protect your convoys from aerial bombardment at all costs, without their supplies your depots will fall. But in your eagerness watch out for the allied Spitfires.

U.S. GOLD
All American Software



Map: Be wise in your campaign strategy, protect those depots in danger from enemy forces, rally your firepower to it's most destructive effect.

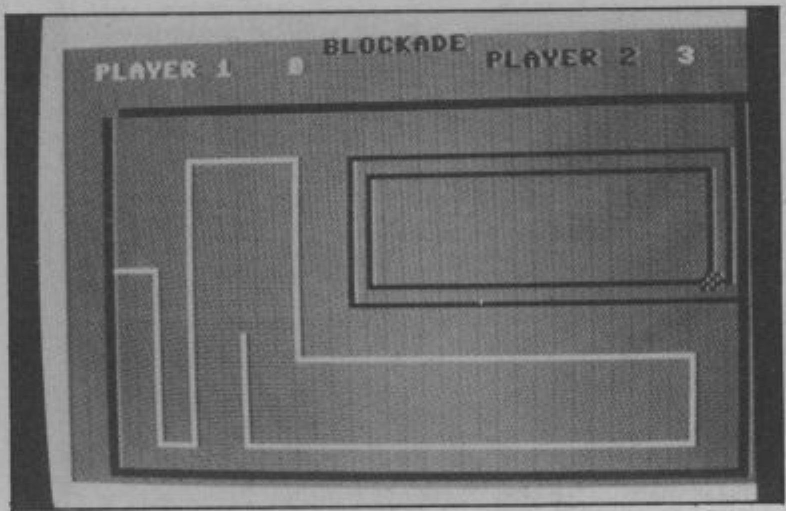


Ambush: The valley is infested with enemy forces but no matter reach the other side you must. Good luck and happy shooting.

U.S. Gold Limited, Unit 10, Parkway Industrial Centre, Heneage Street, Birmingham B7 4LY. Telephone: 021-359 8881

Blockade — for the Commodore 16 and Plus/4

by Stuart Perry



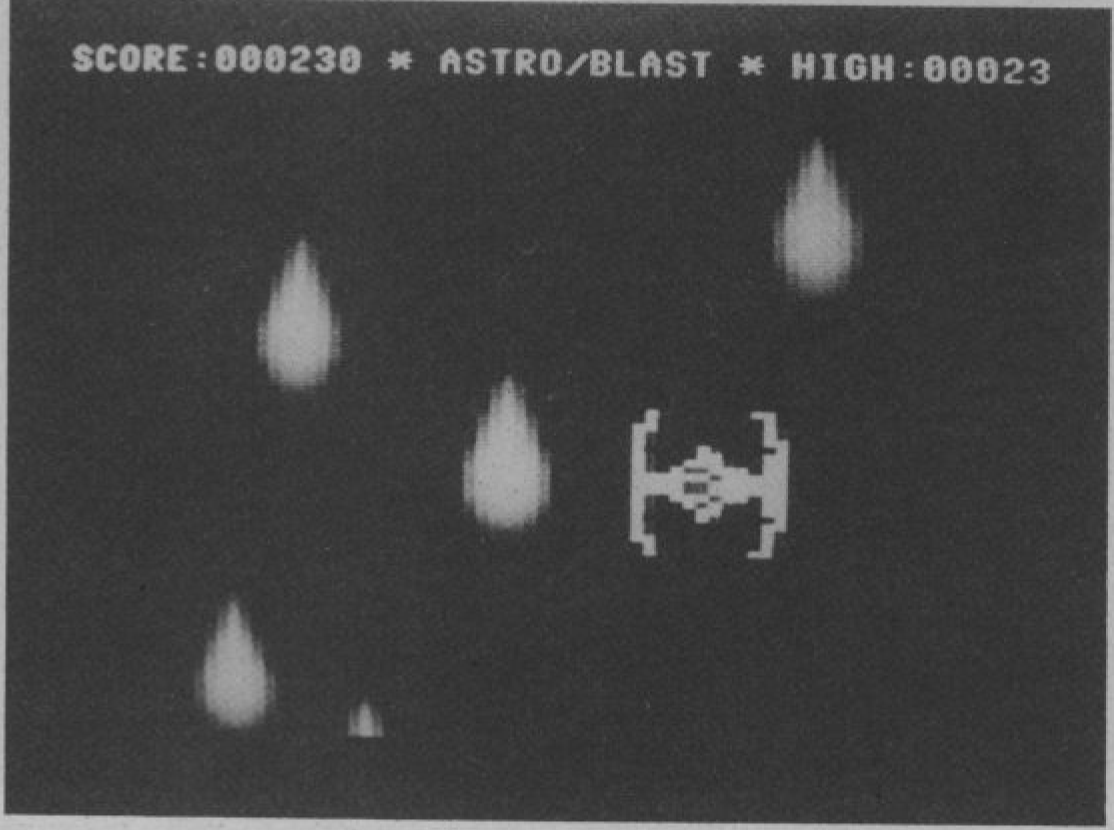
They say that the simple games are the best. Why bother with stunning graphics, wonderful sounds and thousands of screens when you can play a game as frustrating as this. All you need do is direct the line you're controlling so that it doesn't crash into the border or hit your opponent before he or she hits you. Instructions for both players appear on screen. Confused? Go ahead and key it in.

```
10 COLOR0,2,5:COLOR4,15:VOL8:P1=0:P2=0
20 X$="█████████████":DIMCH(1,1):CH(1,0)=64:CH(0,1)=93:DIMCX(3):DIMCY(3)
30 CX(0)=109:CX(1)=125:CX(2)=110:CX(3)=112
40 CY(0)=112:CY(1)=109:CY(2)=125:CY(3)=110
50 B$="▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬"
60 L$="   ██                                  █   "
70 COLOR1,16,4:PRINT"█████                             ┬┬  ┌─┐ ┌─┐ ┌─┐  │"
80 PRINT"  ╘═╛ ╘═ ╘═╛ ╘═╛ ╞╤ ╞═╡ ╘═╛ ╘═ !"
90 PRINT"                                 o"
100 COLOR1,9,4:PRINT:PRINT:PRINT"                CONTROLS"
110 PRINT:PRINT"          PLAYER1      PLAYER 2"
120 PRINT:PRINT" LEFT  :    <Q>           <+>"
130 PRINT:PRINT" RIGHT :    (Z)           (/)"
140 COLOR1,7,4:PRINT:PRINT:PRINT:PRINT"      HIT (RETURN) TO CONTINUE..."
150 PRINT:PRINT"          (E) TO EXIT."
160 GETA$:IFA$=""THEN160
170 IFA$="E"THENPRINT"█████THE END...":END
180 IFASC(A$)<>13THEN160
190 COLOR1,3,3:PRINT"█               BLOCKADE":PRINT:PRINT:PRINT"    █";B$;"█"
200 COLOR1,3,3:FORI=1TO20:PRINTL$:NEXT:PRINT"   █";B$;"█ ";
210 COLOR1,8:PRINT"██  PLAYER 1"
220 COLOR1,15,2:PRINT"██████████████████████████████PLAYER 2"
230 X1=2:X2=37:Y1=12:Y2=14:A1=1:A2=-1:B1=0:B2=0:D1=0:D2=2:S=0
240 COLOR1,2:PRINT"███";X$;"        ██████";P1;X$;"██████     █████";P2
250 GETA$:C1=CH(ABS(A1),ABS(B1)):C2=CH(ABS(A2),ABS(B2)):S=S+1:IFS=2THENS=0
260 X1=X1+A1:X2=X2+A2:Y1=Y1+B1:Y2=Y2+B2
270 IFA$="Q"THENC=B1:B1=-A1:A1=C:D1=INT(((D1+1)/4-INT((D1+1)/4))*4):C1=CX(D1)
280 IFA$="+"THENC=B2:B2=-A2:A2=C:D2=INT(((D2+1)/4-INT((D2+1)/4))*4):C2=CX(D2)
290 IFA$="Z"THENC=-B1:B1=A1:A1=C:D1=INT((ABS((D1+3)/4)-INT(ABS((D1+3)/4)))*4):C1
=CY(D1)
300 IFA$="/"THENC=-B2:B2=A2:A2=C:D2=INT((ABS((D2+3)/4)-INT(ABS((D2+3)/4)))*4):C2
=CY(D2)
310 IFPEEK(3072+40*Y1+X1)<>32THENA1=0:B1=0:P2=P2+1:W=2:X=X+1:Y=Y1:GOSUB400:GOTO1
60
320 IFPEEK(3072+40*Y2+X2)<>32THENA2=0:B2=0:P1=P1+1:W=1:X=X2:Y=Y2:GOSUB400:GOTO16
0
330 GOSUB350
340 GOTO250
350 POKE3072+40*Y1+X1,C1:POKE2048+40*Y1+X1,119
360 POKE3072+40*Y2+X2,C2:POKE2048+40*Y2+X2,46
370 IFS=0THENSOUND1,400+20*D1,5
380 IFS=1THENSOUND1,320+20*D2,5
390 RETURN
400 SOUND3,850,20:SOUND3,800,100
410 FORI=1TO10:POKE3072+40*Y+X,102:POKE2048+40*Y+X,96:FORJ=1TO20:NEXTJ
420 POKE3072+40*Y+X,230:POKE2048+40*Y+X,44:FORJ=1TO20:NEXTJ
430 NEXTI
440 IFW=1THENCOLOR1,8:PRINT"███  PLAYER 1█"
450 IFW=2THENCOLOR1,15,2:PRINT"████████████████████████████████PLAYER 2█"
460 COLOR1,2:PRINT"███";X$;"        ██████";P1;X$;"██████     █████";P2
470 RETURN
62000 T=PEEK(62)*256+PEEK(61)+1
62005 INPUT"FROM LINE ";FROM
62010 INPUT"TO PRINTER (Y/N)";Q$
62011 IFQ$<>"Y"THEN62020
62015 CLOSE4:OPEN4,4:CMD4:PRINTCHR$(1);CHR$(129)
62020 LINK=PEEK(44)*256+PEEK(43):E=61999
62120 T=LINK
62130 LINK=PEEK(T+1)*256+PEEK(T)
62135 LN=PEEK(T+3)*256+PEEK(T+2):IFLN<FROMTHEN62120
62136 IFLN>ETHENPRINT:PRINT"TOTAL=";CH:CLOSE4:END
62137 S$=STR$(LN):L=LEN(S$)-1:S$=MID$(S$,2,L)+MID$("      ",1,6-L)
62138 PRINTS$;
62140 CS=0:N=0:C=0
62150 FORP=T+4TOLINK-2:PK=PEEK(P)
62160 IFPK=143THENP=LINK-2:GOTO62190
62165 IFPK=34THENC=(C=0)
62170 IFC=0ANDPK=32THEN62190
62180 IFPK=137THENN=N+1:CS=CS+(203ORN):PK=164
62185 N=N+1:CS=CS+(PKORN)
62190 NEXT:CH=CH+CS
62192 H$=STR$(CS):Y=LEN(H$):H$=MID$(H$,2,Y):H$=MID$("      ",1,5-(Y-1))+H$
62194 PRINT"= ";H$:GOTO62120
62196 REM
```

Astrobelts — for the Commodore 64

by S Wilson and K Higgot

This is the game for those of you who go in more for deft joystick manipulation than manic zapping. Your task is simply to avoid the onslaught of asteroids — actually, they're very impressive multi-coloured sprites.




```
10 REM ********************************
15 REM **        ASTRO/BELTS         **
20 REM **                            **
25 REM **       PROGRAMMED BY        **
30 REM **                            **
35 REM **   S.WILSON & K.HIGGOTT     **
40 REM **                            **
45 REM ********************************
50 PRINTCHR$(147)CHR$(129)
55 POKE53281,0:POKE53280,0
60 GOSUB475
65 GOSUB340
70 SYS(49152)
75 PRINTCHR$(147):SP=35:SE$="000000"
80 POKEVC+21,63:SC=0
85 PY(1)=VC+3:PX(1)=VC+2
90 PY(2)=VC+5:PX(2)=VC+4
95 PY(3)=VC+7:PX(3)=VC+6
100 PY(4)=VC+9:PX(4)=VC+8
105 PRINTCHR$(19)TAB(13)"* ASTRO/BLAST *"
110 PRINTCHR$(158)
120 SC=SC+10:S$=STR$(SC)
125 S1$=RIGHT$(S$,LEN(S$)-1)
130 SC$=LEFT$(SE$,6-(LEN(S1$)))+S1$
135 IFSC>HITHENHI=SC:HI$=SC$
140 POKEVC+30,0
145 PRINTCHR$(19)"SCORE:"SC$
150 PRINTCHR$(19)TAB(29)"HIGH:"HI$
155 SP=SP-.1:IFSP<10THENSP=10
160 D=PEEK(VC+30)
165 IFD=3ORD=5ORD=9ORD=17ORD=33THEN210
170 POKE56325,INT(SP)
175 POKEVC+37,INT(RND(1)*15+1)
180 POKEVC+38,INT(RND(1)*15+1)
185 FORI=1TO4
190 IFPEEK(PY(I))>230THENPOKEPX(I),INT(RND(1)*210+40)
195 NEXTI
200 GOTO120
```

EASY ENTER

SEE PAGE 81

```
210 S=54272:FORI=0TO24:POKES+I,0:NEXT
215 POKES+5,31:POKES+6,15:POKES+4,129
220 POKEVC+23,63:POKEVC+29,63
225 POKE2040,15:FORK=15TO0STEP-.2
230 POKEVC+28,63:POKEVC+39,INT(RND(1)*15)
235 POKES+24,K:POKES,100:POKES+1,5
240 POKEVC+37,INT(RND(1)*15+1)
245 POKEVC+38,INT(RND(1)*15+1)
250 NEXTK
255 POKES+4,0:POKEVC+21,0
260 PRINTCHR$(19)
265 FORJ=1TO4:PRINT:NEXTJ
270 PRINTTAB(5)"******************************"
275 PRINT:PRINT
280 PRINTTAB(5)"*** YOU'VE BEEN DESTROYED! ***"
285 PRINT:PRINT
290 PRINTTAB(5)"***[6SPC]-GAME[2SPC]OVER-[6SPC]***"
295 PRINT:PRINT
300 PRINTTAB(5)"***[3SPC]ANOTHER GO?[2SPC](Y/N)[3SPC]***"
305 PRINT:PRINT
310 PRINTTAB(5)"******************************"
315 GETK$:IFK$<>"Y"ANDK$<>"N"THEN315
320 IFK$="Y"THENGOSUB565:GOTO75
325 POKE49154,49:POKE49157,234
330 SYS(49152):PRINTCHR$(147)CHR$(154)
335 POKE53280,14:POKE53281,6:POKE56325,42:GOTO 900
340 PRINTTAB(12)"
345 PRINTCHR$(19);
350 PRINTTAB(6)"[4G>Q][2SPC][3G>Q][2SPC][5G>Q] [4G>Q][2SPC][4G>Q]"
355 PRINTTAB(6)"[G>Q][2SPC][G>Q] [G>Q][7SPC][G>Q][3SPC][G>Q][3SPC][G>Q] [G>Q][2S
PC][G>Q]"
360 PRINTTAB(6)"[G>Q][2SPC][G>Q] [G>Q][7SPC][G>Q][3SPC][G>Q][3SPC][G>Q] [G>Q][2S
PC][G>Q]"
365 PRINTTAB(6)"[G>Q][2SPC][G>Q] [G>Q][7SPC][G>Q][3SPC][G>Q][3SPC][G>Q] [G>Q][2S
PC][G>Q]"
370 PRINTTAB(6)"[G>Q][2SPC][G>Q] [G>Q][7SPC][G>Q][3SPC][G>Q][3SPC][G>Q] [G>Q][2S
PC][G>Q]"
375 PRINTTAB(6)"[G>Q][2SPC][G>Q] [G>Q][7SPC][G>Q][3SPC][G>Q][3SPC][G>Q] [G>Q][2S
PC][G>Q]"
380 PRINTTAB(6)"[G>Q][2SPC][G>Q] [G>Q][7SPC][G>Q][3SPC][G>Q][3SPC][G>Q] [G>Q][2S
PC][G>Q]"
385 PRINTTAB(6)"[4G>Q][2SPC][3G>Q][4SPC][G>Q][3SPC][4G>Q][2SPC][G>Q][2SPC][G>Q]"
390 PRINTTAB(6)"[G>Q][2SPC][G>Q][5SPC][G>Q][3SPC][G>Q][3SPC][G>Q][3SPC][G>Q] [G>
Q][2SPC][G>Q]"
395 PRINTTAB(6)"[G>Q][2SPC][G>Q][5SPC][G>Q][3SPC][G>Q][3SPC][G>Q][3SPC][G>Q] [G>
Q][2SPC][G>Q]"
400 PRINTTAB(6)"[G>Q][2SPC][G>Q][5SPC][G>Q][3SPC][G>Q][3SPC][G>Q][3SPC][G>Q] [G>
Q][2SPC][G>Q]"
405 PRINTTAB(6)"[G>Q][2SPC][G>Q][5SPC][G>Q][3SPC][G>Q][3SPC][G>Q][3SPC][G>Q] [G>
Q][2SPC][G>Q]"
410 PRINTTAB(6)"[G>Q][2SPC][G>Q][5SPC][G>Q][3SPC][G>Q][3SPC][G>Q][3SPC][G>Q] [G>
Q][2SPC][G>Q]"
415 PRINTTAB(6)"[G>Q][2SPC][G>Q][5SPC][G>Q][3SPC][G>Q][3SPC][G>Q][3SPC][G>Q] [G>
Q][2SPC][G>Q]"
420 PRINTTAB(6)"[G>Q][2SPC][G>Q][2SPC][3G>Q][4SPC][G>Q][3SPC][G>Q][3SPC][G>Q] [4
G>Q]"
425 PRINTTAB(6)"[27G>C]"
430 PRINTTAB(6)"[G<H]**********BELTS********** [G<H]"
435 PRINTTAB(6)"[27G>C]"
440 PRINT:PRINT
445 PRINTTAB(3)"PROGRAMMED BY S.WILSON & K.HIGGOTT"
450 PRINT:PRINT
455 PRINTTAB(6)"** PRESS TRIGGER TO START **"
456 GOTO800
460 IFPEEK(56320)<>111THEN460
465 RETURN
475 FORI=49152TO49220
480 READJ:CC=CC+J
485 POKEI,J:NEXTI
490 READJ:IFCC<>JTHENEND
495 DATA120,169,13,141,20,3,169,192
500 DATA141,21,3,88,96,238,3,208,238,5
505 DATA208,238,7,208,238,9,208,238,11
510 DATA208,173,0,220,201,123,240,7
515 DATA201,119,240,16,76,49,234,173,0
520 DATA208,201,50,240,3,206,0,208,76
525 DATA49,234,173,0,208,201,255,240,3
530 DATA238,0,208,76,49,234,0
535 DATA8873:REM*CHECKSUM*
```

```
545 FORK=0TO2
550 FORI=0TO62:READJ
555 POKEI+(64*(13+K)),J
560 NEXTI,K
565 POKE2040,13
570 FORI=0TO4:POKE2041+I,14:NEXT
575 VC=53248
580 POKEVC+28,62:POKEVC+37,7
585 POKEVC+38,1:POKEVC+39,12
590 POKEVC+40,8:POKEVC+41,8
595 POKEVC+42,8:POKEVC+43,8
600 POKEVC+44,8
605 POKEVC+23,62:POKEVC+29,62
610 POKEVC,155:POKEVC+1,150
615 POKEVC+2,95:POKEVC+3,170
620 POKEVC+4,40:POKEVC+5,240
625 POKEVC+6,180:POKEVC+7,200
630 POKEVC+8,200:POKEVC+9,80
635 POKEVC+10,60:POKEVC+11,50
640 DATA 56,0,28,48,0,12,112
645 DATA 0,14,96,0,6,224,0
650 DATA 7,192,24,3,224,60,7
655 DATA 224,126,7,227,165,199,255
660 DATA 219,255,255,165,255,255,165
665 DATA 255,227,219,199,224,102,7
670 DATA 224,60,7,192,24,3,224
675 DATA 0,7,96,0,6,112,0
680 DATA 14,48,0,12,56,0,28
685 :
690 DATA 0,0,0,0,16,0,0
695 DATA 152,0,0,152,0,0,152
700 DATA 0,0,152,0,2,154,0
705 DATA 2,86,0,2,86,0,2
710 DATA 86,0,2,86,0,9,117
715 DATA 128,9,117,128,9,117,128
720 DATA 10,86,128,2,86,0,2
725 DATA 154,0,2,170,0,0,168
730 DATA 0,0,0,0,0,0,0
735 :
740 DATA 56,0,28,48,0,12,112
745 DATA 0,14,96,0,6,224,0
750 DATA 7,192,24,3,224,60,7
755 DATA 224,126,7,227,165,199,255
760 DATA 219,255,255,165,255,255,165
765 DATA 255,227,219,199,224,102,7
770 DATA 224,60,7,192,24,3,224
775 DATA 0,7,96,0,6,112,0
780 DATA 14,48,0,12,56,0,28
785 RETURN
800 FORM=0TO24:POKE54272+M,0:NEXT
810 M=54272:POKEM+24,15:POKEM+5,111:POKEM+6,240
820 FORX=4TO255STEP2
830 POKEM+1,X:POKEM+4,17
840 FORK=1TO4:NEXTK:NEXTX
850 C=C+1:IFC=3THEN870
860 GOTO820
870 POKEM+24,0:GOTO460
900 NEW

READY.
```

HOW TO USE EASY ENTER

EASY ENTER

COLOUR CODES

[BLK]	— press CTRL and 1
[WHT]	— press CTRL and 2
[RED]	— press CTRL and 3
[CYN]	— press CTRL and 4
[PUR]	— press CTRL and 5
[GRN]	— press CTRL and 6
[BLU]	— press CTRL and 7
[YEL]	— press CTRL and 8

[ORG]	— press CBM key and 1
[BRN]	— press CBM key and 2
[L RED]	— press CBM key and 3
[GR1]	— press CBM key and 4
[GR2]	— press CBM key and 5
[L GRN]	— press CBM key and 6
[L BLU]	— press CBM key and 7
[GR3]	— press CBM key and 8

COMMODORE GRAPHIC CHARACTERS

PRINT WHITE
CURSOR DOWN
REVERSE FIELD ON
HOME
PRINT RED
CURSOR RIGHT
PRINT GREEN
PRINT BLUE
FUNCTION KEY F1
FUNCTION KEY F3
FUNCTION KEY F5
FUNCTION KEY F7

FUNCTION KEY F2
FUNCTION KEY F4
FUNCTION KEY F6
FUNCTION KEY F8
PRINT BLACK
CURSOR UP
REVERSE FIELD OFF
CLEAR
INSERT
PRINT PURPLE
CURSOR LEFT
PRINT YELLOW
PRINT CYAN

OTHER CODES

[CU]	— press 'cursor up' key
[CD]	— press 'cursor down' key
[CL]	— press 'cursor left' key
[CR]	— press 'cursor right' key
[HOM]	— press HOME key
[CLS]	— press CLEAR key
[DEF]	— press INST key (insert)
[REV]	— press RVS ON key (CTRL and 9)
[OFF]	— press RVS OFF key (CTRL and 0)
[SPC]	— press spacebar
[G<key]	— press CBM key with specified key
[G>key]	— press SHIFT key with specified key

EXAMPLES:

[3SPC]	— press spacebar three times
[5CD]	— press 'cursor down' key five times
[G>F]	— press SHIFT key with 'F'

Enter the world of computer adventure. Each adventure takes several weeks to master, providing hours of fascination and intrigue. You must use your imagination and logic to unlock the mysteries of each adventure.
Map skills are essential; each adventure contains full-colour computer generated images which lead you in every direction. You'll need to muster up all your wit and logic and perseverance for each of our adventures will prove a test to your imagination and ingenuity.

BORED WITH SHOOT'
then it

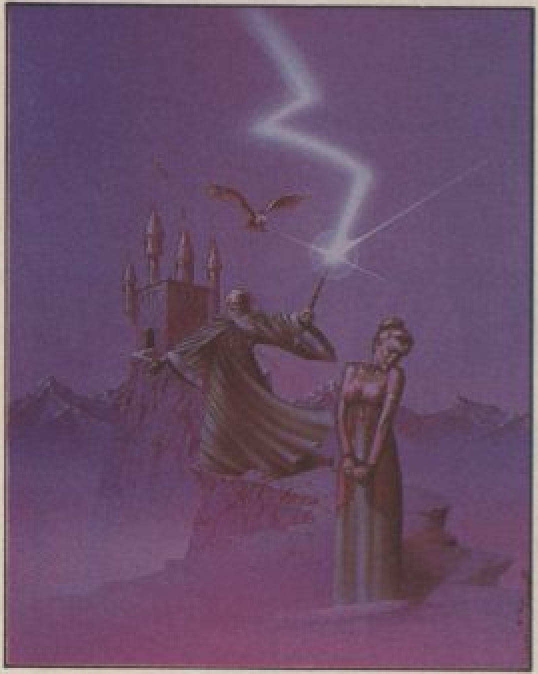
VENTURE

An Epic Fantasy Role-Playing Experience

- Up to 20 character roster
- A 1 to 4 character party
- Individual player movement
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- 8 armour types
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- 32 magic spells
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- New combat mode
- New ship to ship or shore combat
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- New animated outdoor graphics
- Sound on/off toggle
- New navigational strategies
- Adventure style verb entry
- New astrological influences

The Wizard & The Princess
from Sierra On-Line

Become the hearty and steadfast adventurer who rescues the fair princess from the dreadful wizard, Harlin. He has taken her to his towering castle beyond the great mountains. You must outwit and outmanoeuvre the mystical power of the wizard which has grown dark and potent through time. Begin your adventure in the village of Serinia, but take heed, everything is not as it may appear.

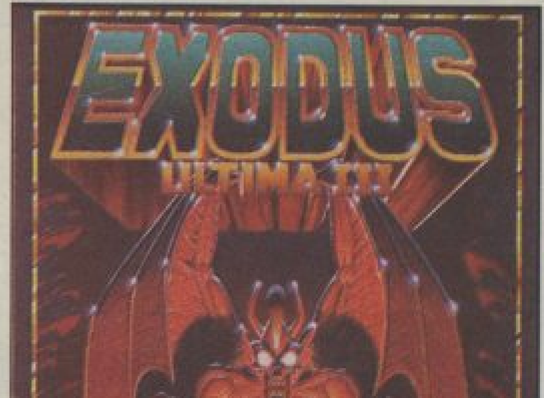


Exodus-Ultima III
from Origin Systems

Upon escaping the crumbling ruins of Shadowguard, the black fortress of Minax, you lay your weary body on the now-sacred ground. As you rest, you remember your first encounter with the evil wizard of Mondain, whom you later tracked down and destroyed. The existence of his apprentice, Minax, was soon revealed and the crusade was begun again. Younger and more cunning than her mentor, she has been much more difficult to vanquish. But now your sense of accomplishment is touched by a chilling fear. Have all vestiges of evil been removed? Somehow, you sense that your trecherous foes have not been eliminated. Without further feats of skill, daring, and perseverance, all of your past accomplishments may be lost. You stand up, prepare your armour, and walk to the dimension door. Stepping in, the hunt resumes.

Ulysses & The Golden Fleece
from Sierra On-Line

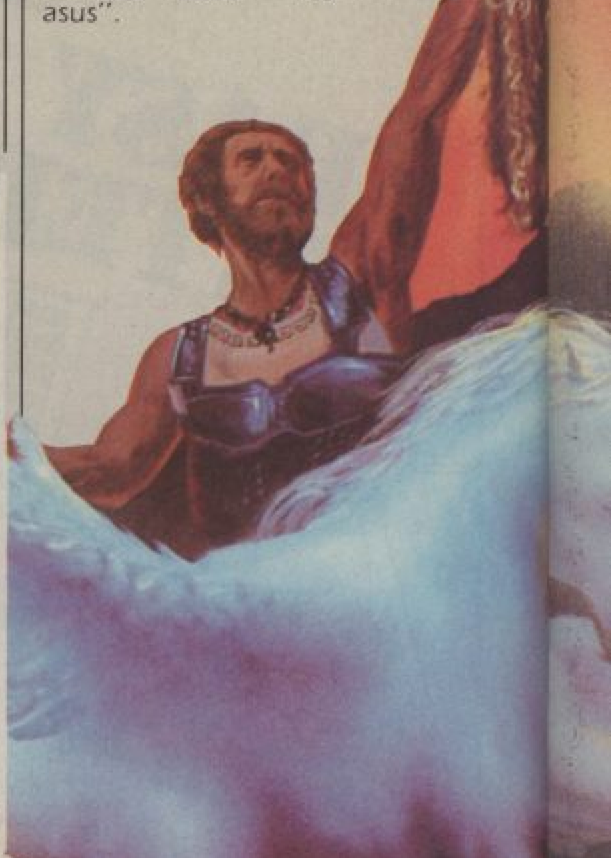
Protected by the gods, the "Golden Fleece", legendary treasure of ancien mythology, has been kept from man fo many decades. Many valiant men hav attempted its recovery, but none hav been successful in possessing it for an amount of time. The setting is ancien Greece and YOU are Ulysses. The king ha requested an audience with you, to assig you the task of retrieving the "Golde Fleece", and returning it safely to him.
On your voyages you will encounter man of the same foes dealt with by you predecessors. (The wicked "Sirens", whos beautiful songs lure unsuspecting seame to their deaths on the island's trecherou shores: the Cyclops, son of king Neptune Pluto mythological god of the underworld and others). Highlighting your journey is an encounter with the magnificent winged horse "Pegasus".



Wizard & The Princess	C64 Disk	£14.95
Exodus-Ultima III	C64/Atari Disk	£19.95
Ulysses	C64 Disk	£14.95

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T'E UP SPACE INVADERS?
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Legend acclaims Ulysses as the most daring and skilled seaman of all time. Clad in a pocketed "toga" and chain armour, it's up to you to prove it!

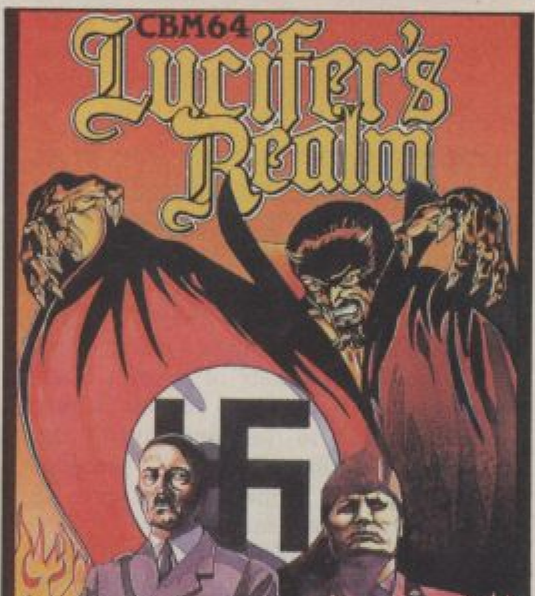
Mission Asteroid
from Sierra On-Line

A terrible tragedy is about to happen... An asteroid of incredible size is headed for a direct collision with the Earth. The predicted impact could destroy all life here – unless something is done quickly.
As an astronaut, it's your duty to rocket to the asteroid and attempt to alter its course.

There's no time to lose! If you don't do things exactly right and travel fast enough, there will be DISASTER!
The asteroid will collide with Earth at a predetermined time. You are wearing a watch, which, if checked periodically, will let you know how much time you have left.
If you're quick and careful, you will save us all from oblivion. If not, don't bother landing on Earth again, you will have no home to return to... Good luck!







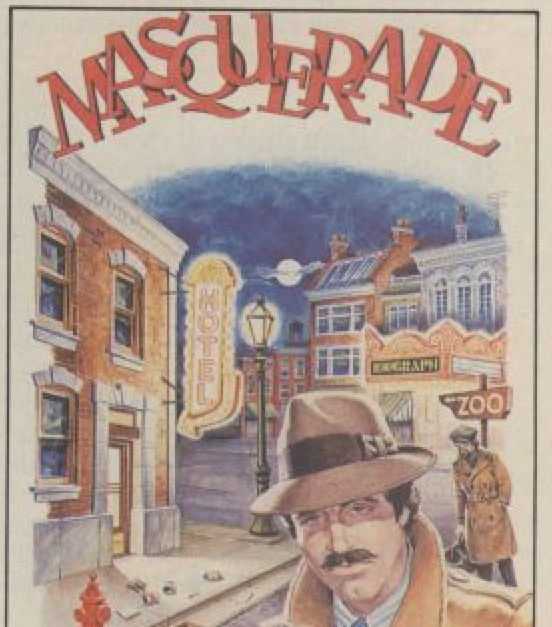
Lucifer's Realm
from American Eagle

By some tragic twist of fate your departure from this life leads not to Heaven as expected, but a journey which deposits you in Hell!
On coming face to face with Lucifer you find he is strangely kind to you. A path to Heaven can be yours but tread carefully — this journey is littered with the likes of Adolf Hitler and Benito Mussolini.

Masquerade
from American Eagle

It turned out to be the toughest case of your detective career. Clues have led to nothing but dead ends. Nobody is talking. Meanwhile, the crime boss you are after is still operating from somewhere. You're about to throw in the towel. But wait! Something breaks. You trail a stooge of the crime organisation to a cheap, seedy hotel, hoping to pump some answers out of him. You break into the hotel room and with the butt end of your trusty .44 magnum, you knock him cold. This could be the lead you've waited for. Maybe, just maybe, if you could find some clues...

Mission Asteroid	C64 Disk	**£14.95**
Lucifer's Realm	C64/Atari Disk	**£14.95**
Masquerade	C64 Disk	**£14.95**



All American ADVENTURES

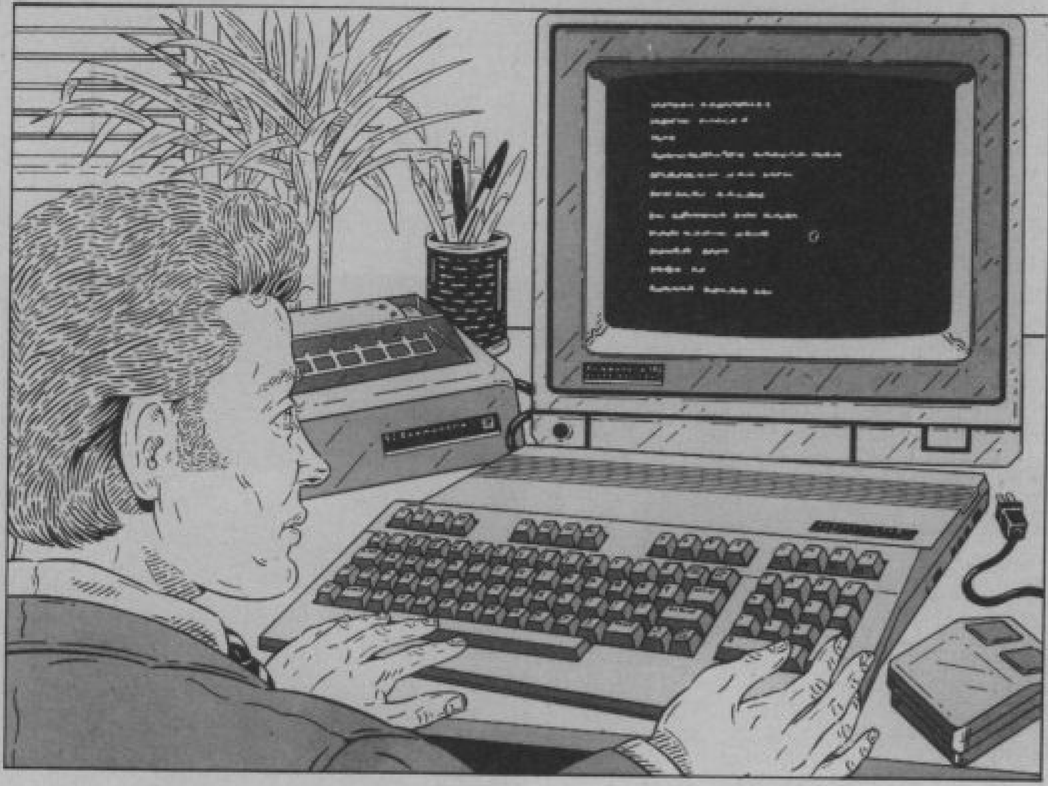
ALL AMERICAN ADVENTURES
UNIT 10,
THE PARKWAY INDUSTRIAL CENTRE,
HENEAGE STREET, BIRMINGHAM B7 4LY.

Last month we took a general look at the 128's upgrade potential from the 64. Now it's time to look at its much-talked of CP/M facility. How really useful is it? And will you really be able to run world-famous packages like WordStar and dBase II?

GOING UP TO 128

Part 2 — coping with CP/M

by Karl Dallas



Last month, we looked at two software packages that have been rewritten to take advantage of the special capabilities of the C128, including its larger memory than the 64. We had a few problems with the RGBI monitor output which meant that we couldn't look at CP/M software.

I still haven't seen the promised 1901 monitor from Commodore, but I have elucidated the fact that the plug connection is identical to the popular IBM PC, so that any IBM-compatible monitor will produce a display from the C128, including CP/M mode. Such a set-up will not take advantage of the 128's "intensity" variations which allow it to show a total of 16 colours, so you'll be restricted to only eight. But since most CP/M business programs are monochrome anyway, this won't worry the business user.

Booting up CP/M

Most CP/M computers are "clean machines", without any Basic or other languages in ROM, which means that they have to boot up from disk, first loading the operating system (CP/M), and then, if necessary, any software the user may wish to utilise. Although the 128 comes with Basic 7 in ROM, to use it in CP/M mode you have to break the habits of a Commodore lifetime and turn it on with the CP/M disk in the drive (and the <40/80 DISPLAY> key depressed, if you want 80-column display). The monitor then shows the usual 128 Basic opening display, followed by a clear screen and a load of funny numbers.

These just mean that the computer has gone through its diagnostic routine. You will see the message, **59K TPA** at the bottom of the screen which means that it has 59k of TPA (transient program area or RAM) available for your use. The cryptic message at the bottom right of the screen **RA0110**, describes the disk status: the first letter whether the disk is "read" (R) or "write" enabled, then the drive letter (almost certainly A, though CP/M can handle up to four drives), then a two-digit figure for the track number, followed by a similar figure for the sector number.

This is quite a handy little display, which I haven't come across on other CP/M computers before, which lets you know what's happening, disk-wise, when the whole system seems to have hung.

The software choice

Now, the great thing about CP/M is that it is usually described as "the biggest pool of specially written software", which is transportable between widely different machines. This is true, up to a point: every CP/M program consists of a core, often plus a specially written section which relates that core to the capability of the particular machine. The real problem comes with disk formats, which can be widely different from each other.

What this really means is that the CP/M standard is rather like the RS232 interface standard: more honoured in the breach than the observance.

According to the 128 manual, though the Commodore disk drive uses a group code recording (GCR) format, and most other CP/M disk drives use modified frequency modulation (MFM), it can actually handle MFM disks from nine popular machines, including the *Epson QX10*, four *IBM* formats, two from *Kaypro*, and two from *Osborne*.

The bad news is that five of these use double-sided disks and the 1570 drive being distributed with the 128 in its initial sales drive can only access single-sided disks. This could mean that since most CP/M programs use overlays to overcome the 64K limitation on the amount of space any program may occupy in TPA (or RAM), if the overlays are on the reverse side of the disk then they won't be accessed.

I tried to load up commercial software written on single-sided disks for the Osborne and the Kaypro II, with rather mixed success. Most of the Osbornes gave me one of those mystifying error messages (which are undocumented in any of my CP/M manuals).

However, I did manage to load up *MBASIC* (a very useful Microsoft Basic with none of the funny quirks of

Commodore Basic) and one *WordStar* disk intended for the Osborne. Since I was checking out about 12 Osborne disks (including another WordStar, which wouldn't load), this isn't really a very good response, and seems to suggest that you should beware of snapping up copies of Osborne software at bargain prices unless you get them from a dealer who's also got a C128 you can check it on before you buy.

On the other hand, a similar batch of Kaypro II software gave me a 100 per cent success rate — though not until I had found an instruction on how to do it that is undocumented in the Commodore manual, but hidden away in a "HELP" file on the CP/M system disk.

When I put the Kaypro disk in the drive and typed DIR, a little reverse message carrying the information "KAYPRO IV" was displayed (which surprised me, since I thought I was using a Kaypro II disk). Pressing <RETURN> produced some disk activity and then an error message — until I discovered the HELP file. What I had to do was to press the right cursor to bring up a "KAYPRO II" message and then press <CONTROL> + <RETURN> to "lock" into the Kaypro II mode. The programs then loaded, among them *dBase II*, which must be the second most popular CP/M business program, after WordStar (which is the most popular).

Incidentally, this process doesn't work if you are utilising an old-1541 disk drive, which can only read GCR disks. The other thing you'll need to know is that though the drive mentions four IBM formats (two of them single-sided), these are for the very powerful 16-bit CP/M-86, operating system which Digital Research, owners of the CP/M system, have produced for use on the IBM PC and clones, like the Commodore PC10. The 128 will not handle CP/M-86 programs, but it should be able to read CP/M-86 data files, which may be useful to someone. However, anyone who thinks the references to IBM in the 128 brochures mean that it can read IBM data files (which are more likely to have been produced under Microsoft's MS-DOS or PC-DOS than Digital Research's CP/M-86) is in for a big disappointment.

Know your monitor

Two other things the novice CP/M user will have to learn need to be emphasised before I introduce you to the magic of WordStar. The first concerns monitors. You can display CP/M on a monitor connected to the computer's composite video socket, as long as the <40/80 DISPLAY> key is not depressed. You will then get a 40-column display, of course, which you can scroll sideways to read the entire 80-columns.

Incidentally, if you are likely to be using 40-column as well as 80-column displays, then you'll need a monitor with composite video input as well as an RGBI monitor, since while a composite video monitor can't handle 80 columns, an RGBI monitor can't handle 40. (The good news is that Commodore's own monitor is switchable between both modes).

The second thing you need to know concerns disk changing. Always, always, ALWAYS press <CONTROL> + <C> when you change disks. Otherwise, the computer works from the old directory, and so won't be able to find the program or file you are accessing. This single fact is the cause of most of the "BDOS ERROR ON A:" error messages that plague beginners.

Introducing Wordstar

It's not hard to understand why MicroPro's *WordStar* became the world's best selling package when it was first introduced. In those days, it was the first WP program to take advantage of 80-column screens and provide a WYSIWYG (what you see is what you get) display. However, this is far from being rare as it once was, so it beats me why it continues to be so popular.

Popular it is, and I'm sure that many users will be persuaded to upgrade from the 64 by the news that, with a bit of shopping around second-hand computer dealers you can get WordStar to work on the 128.

However, what many Commodore users will find hard to take is the loss of the excellent CBM screen-handling. Instead, Wordstar uses a block of keys at the left of the keyboard in a seemingly unnecessarily complicated manner — which becomes fairly simple, once you have realised the logic behind it. If you look at any "QWERTY-type" keyboard, you will see a block of keys arranged thus:

W E R

A S D F

Z X C

The middle line is used by WordStar for moving the cursor left and right, respectively, when combined with <CONTROL>: <CONTROL> + <S> moves one character to the left and <CONTROL> + <D> one character to the right, <CONTROL> + <A> one *word* to the left, <CONTROL> + <F> one word to the right.

The "W E R" line moves upwards: <CONTROL> + <E> moves the cursor up one line, <CONTROL> + <W> scrolls the screen up one line, leaving the cursor where it was, and <CONTROL> + <R> scrolls up one screen. Similarly with the "Z X C" line: <CONTROL> + <X> moves the cursor down one line, <CONTROL> + <Z> scrolls down one line without moving the cursor, and <CONTROL> + <C> scrolls down a screen (providing there is at least a screen of copy below the cursor).

Another good thing — though with a double edge to it — is the fact that Wordstar stores text automatically on to disk as you write, not as a safety factor (if you don't SAVE text to disk before you quit the program, it's still lost irretrievably) but in order to get over the 64K limitation of CP/M memory (actually, in the 128 case, 59K, as we've seen). Since most of the text isn't held in RAM, there is therefore no limitation on the length of a document. Gone are the days when linked files are needed.

The bad news, however, is that all this disk access slows things down more than somewhat, so it can take an infuriatingly long time to scroll from the beginning to end of a long-ish document (eg anything over a couple of pages).

Another thing you should beware of is using WordStar with a nearly-full disk, because there won't be room for these temporary "spill files" (as they're called), especially if you're revising a document that's already been stored on that same disk.

In short, therefore, WordStar is a very powerful though not very friendly program. However, once you've got inside it, you may find the RAM-based word processors most Commodore machines have run in the past hopelessly limited.

Next month we'll be providing you with a really comprehensive roundup of all the latest business packages we've heard about on the 128. □

```
          not editing
                < < <  O P E N I N G   M E N U  > > >
   ---Preliminary  Commands---   | --File  Commands-- | -System  Commands-
 L  Change logged disk drive     |                    |  R  Run a program
 F  File directory    now ON     |  P  PRINT a file   |  X  EXIT to system
 H  Set help level               |                    |
  ---Commands to open a file---  |  E  RENAME a file  | -WordStar Options-
    D  Open a  document  file    |  O  COPY   a file  |  M  Run MailMerge
    N  Open a non-document file  |  Y  DELETE a file  |  S  Run SpellStar

directory of disk A:
 COMQUEST     COMQUEST.BAK MEMO         PRINT.TST     TEST1        WS.INS
 WSCOLOR.BAS  CHKDSK.COM   COMMAND.COM  WINSTALL.COM  WS.COM       WSU.COM
 WINSTALL.OVR WSMSGS.OVR   WSOVLY1.OVR




 1HELP   2INDENT 3SET LM 4SET RM 5UNDLIN 6BLDFCE 7BEGBLK 8ENDBLK 9BEGFIL 10ENDFIL
```

Despite its clumsy screen-handling, WordStar does offer a number of Help screens.



INTELLIGENCE UNIT MEMO . . . ALL UNDERCOVER PERSONNEL TO BE ISSUED WITH COMMODORE MICROS (VIC, 64, 16, PLUS/4) FOR USE IN SENDING SECRET MESSAGES . . . READ AND MEMORISE INSTRUCTIONS BELOW . . . THIS PAGE WILL SELF-DESTRUCT. . . .

SECRET SERVICE

Codes and ciphers on your Commodore micro — Part one

by John Ransley

Agent Smiley's got a real problem; he needs to send an urgent secret message to the Spy who's out in the cold but he suspects the messenger, Agent Defectov, is working for the other side. Simple, he writes the message in the form of a code which the Spy can decipher when he reads it. Good idea? well, they've only been doing it for the last 5000 years.

Given that all codes and ciphers involve the manipulation, exchange reinterpretation of combinations mainly of words and letters — which are chores even the simplest micro finds easy to perform — it's a fairly simple matter to devise compact Basic programs which will allow you effortlessly to call into play for your own amusement and maybe even practical value a number of the spymaster's classic techniques of bafflement.

But first, let's find out what *codes* and *ciphers* really mean, and come to grips with some of the other key terms used. The original message you want to process or encode is known as the *plaintext*. A *code* (from the Latin word *codex*, meaning book) may take the form of altogether different words, numbers and symbols to represent the original plaintext.

The final arrangement of these is called the *cryptogram*, from the Greek *kryptos*, meaning secret, and *graphein* — to write. Fathoming the real meaning of such cryptograms is called *decoding*.

Ciphers — from the Arabic word *cifer*, meaning a blank or void — use all the letters and numerals contained in the orginal plaintext to encipher it but jumbles them up or *transposes* them to make their original meaning unfathomable. Sometimes, additional characters are introduced to further disguise the plaintext, and this is called *substituting*. Making sense of this style of cryptogram is called *deciphering*.

Let's start with a few simple examples of jumbling up messages: each method will be followed by a short program you can type in on your Vic, 64, 16 or Plus/4 computer.

Mirror Coding

One of the simplest ways of delaying if not totally preventing comprehension of a message is mirror coding; that is, simply reversing every character in the plaintext from right to left, so that the last letter of the message is printed first, and so on. Thus the plaintext:

MEET ME ON THE BATTLEMENTS AT MIDNIGHT

is transformed into

THGINDIM TA STNEMELTTAB EHT NO EM TEEM.

Mirror encoding is fairly tiresome and prone to mistakes, so make your micro do the job for you. The mirror encoder program is simply this:

```
100 PRINT "TYPE IN THE MESSAGE —"
110 PRINT "MAXIMUM 255 CHARACTERS INC. SPACES—"
120 PRINT "AND THEN HIT RETURN."
130 INPUT M$
140 FOR X = LEN(M$) TO 1 STEP—1
150 PRINT MID$(M$,X,1)
160 NEXT X
170 GOTO 100
```

The beauty of this routine is that it can be used not only to *encode* plaintext but also to *decode* the cryptograms so produced — try it and see!

Caesar's Alphabet

Julius Caesar wasn't too good at dodging the senatorial switchblades but it seems that he was a dab hand at devising ways of sending secret messages to his friends. One of them — named, naturally enough, Caesar's Alphabet — is used even today in different forms.

It simply involves moving the order of the standard 26 letters forward three places, so that Caesar's Alphabet begins like this: DEFGHIJKLMN and so on. It ends with WXYZABC.

So if you write one below the other and read off the corresponding letters of Caesar's Alphabet it will be seen that, for example, the plaintext.

I NEED HELP

is enciphered as:

L QHHG KHOS.

Again, it's easier and faster to let your micro do this for you using the next program, which exploits the fact that each character in Commodore's standard alpha-

numeric set has its own unique ASCII code and CHR$ value — that for A is CHR$(63), whereas the ASCII code for the same letter is 65, and so on.

The central loop examines each character of the plaintext in turn and adds three to the original value to produce the transposition. **Line 180** takes care of the out-of-sequence letters A, B and C.

```
100 PRINT "TYPE IN THE
MESSAGE—"
110 PRINT "MAXIMUM 255
CHARACTERS
    INC. SPACES—"
120 PRINT "AND HIT RETURN"
130 INPUT M$
140 PRINT
150 FOR X=1 TO LEN(M$)
160 C$=MID$(M$,X,1)
170 CV=ASC(C$)+3
180 IF CV>90 THEN CV=CV—26
190 PRINT CHR$(CV);
200 NEXT X
210 PRINT:PRINT:GOTO 100
```

Helpfully, this routine automatically introduces a hash symbol (#) between words where originally there were spaces, which makes the end result clearly more puzzling!

With just a couple of alterations, you can use this same program for deciphering cryptograms assembled using Caesar's Alphabet. They are:

```
170 CV=ASC(C$)—3
180 IF CV<65 THEN CV=CV+26
```

When entering text for deciphering, be sure to type a hash symbol between each word.

There's no reason why you shouldn't devise your own version of Caesar's effort, using one of your own initials as its starting point instead of D. In that case, you'll have to figure out the changes then needed to **lines 170** and **180** in both versions of the program. For example, if you chose to start your alphabet three letters further on, at G, then **line 170** of the enciphering program would need to read,

170 CV=ASC(C$)+6

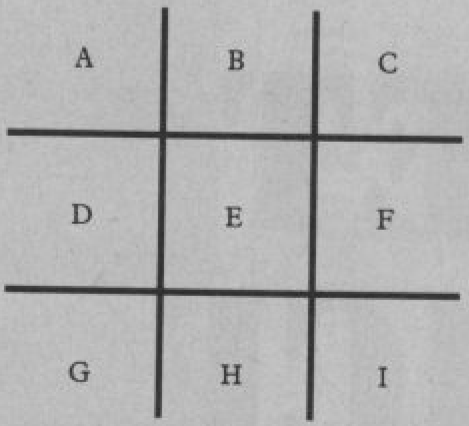
and so on.



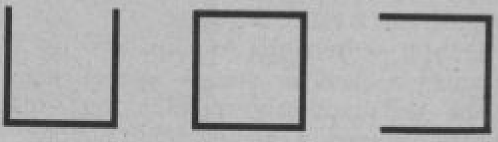
Egyptian ciphers

The ancient Egyptians were masters in using hieroglyphics and pictograms to convey ideas and teachings. And it was their use of *diagram ciphers* which inspired medieval freemasons (themselves supposedly descended from King Solomon's 10th century artisans) to develop a cutdown version to suit their simpler needs.

With this, letters of the alphabet, half of them dotted, are enclosed in 'pig pens', and the patterns thus formed suggest the code itself. For example:

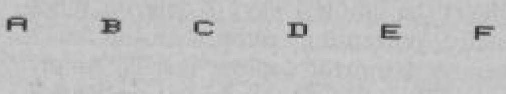


Thus, instead of writing the letters themselves, the pattern of the border unique to each character is used, so the word BED would be interpreted as:



To implement a faithful replica of this system would unfortunately require spending some considerable time designing and programming a redefined character set. An easier way out is to substitute a selection of the graphic characters (which number many more than 26) shown on the keyfronts and access for use in PRINT statements through the Commodore and SHIFT keys.

Avoid using the horizontal and vertical rules and go instead for the clearly recognisable segments, circles, diagonals and playing card symbols, like these:



Thus the word BED would appear as



Polybius Square

Polybius was not, as one might imagine, a narrow-minded parrot but a Greek mathematician who dreamt up new forms of ensuring state secrecy for his Roman masters in return for the occasional stay of execution. One of his most masterful creations (see diagram) was a numbered grid containing all the letters of the alphabet, each of which was referenced by a unique two-figure combination.

In this, it predicted the modern computer array — and the following short program can indeed be used to imitate exactly the way Roman commanders enciphered secret messages using a Polybius Square.

```
100 DIM A$(5,5)
110 FOR X=1 TO 5
120 FOR Y=1 TO 5
130 READ A$(X,Y)
140 NEXT Y:NEXT X
150 :
160 PRINT "ENTER LETTER
    FOR ENCIPHERING"
170 INPUT L$
180 FOR X=1 TO 5
190 FOR Y=1 TO 5
200 IF A$(X,Y)=L$ THEN PRINT
    "REF."X;Y:GOTO 160
210 NEXT Y:NEXT X
220 :
230 DATA A,B,C,D,E,F,G,H,I,J,K,L
240 DATA M,N,O,P,Q,R,S,T,
U,V,W,X,Z
```

Entering any letter in response to **lines 160** and **170** will generate the matching two-digit reference (row, column) so that, for example, the message LEAVE QUICKLY would produce this cryptogram:

32 15 11 52 15 42 51 24 13 31 32 54

Note that the letters X and Y share the same grid position (5,4); it is usually obvious on enciphering which letter is wanted. Again, there is plenty of scope here for producing a customised Polybius Square, which you can easily do by just tinkering with the Data in **lines 230** and **240**. For example, you could reverse the order in which the letters of the alphabet are read by **line 130** so that the letter Z fell in square 1,1 and so forth.

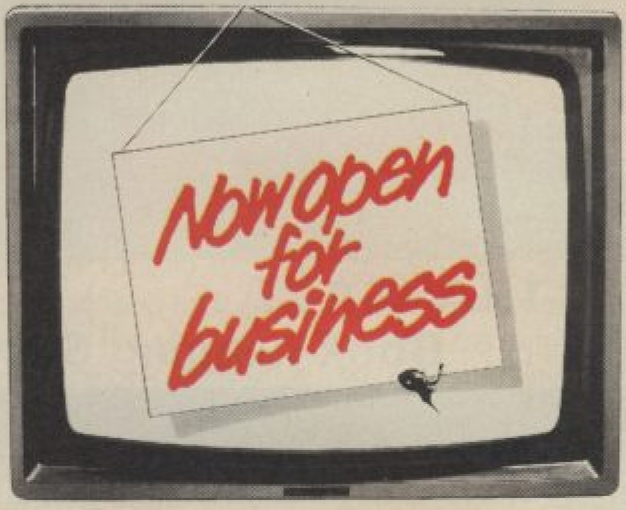
In next month's article, I will be introducing you to the wonders of systems involving more sophisticated transpositions, key number ciphers, super encicodes, and the mysteries of two ingenious cipher tables devised in the 16th century and still much used today by departments of dirty tricks throughout the shadowy world of modern espionage. □

A POLYBIUS SQUARE

	1	2	3	4	5
1	A	B	C	D	E
2	F	G	H	I	J
3	K	L	M	N	O
4	P	Q	R	S	T
5	U	V	W	XY	Z

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Mind yer la

A look at new 64 programming languages

by Chris Durham

PASCAL

PASCAL was invented by Niklaus Wirth in Switzerland in 1968 and was released as a working language around 1970. It's a rigidly structured language, which many programmers feel is a major advantage in encouraging 'proper' programming techniques. PASCAL is very rich in many respects, especially in the manner in which the programmer can develop his own data types, using English words that make the program very readable.

Because it's so rigidly structured, some people find it difficult to adapt from the free and easy techniques they learnt from Basic. However, once you've mastered the disciplined approach to programming demanded by PASCAL, you probably won't go back to Basic.

PASCAL is a *compiled* language, which means that after writing the code, you must then run a program which converts this into machine-code. Most versions of PASCAL, though, run under a type of 'intermediate' code, called P-code, which is not as fast as pure machine code, but is still faster than an interpreted language like Basic. The actual speed gains depend very much on what the program is doing, but normally the bigger and more complicated the program is, the greater the effective gain over Basic.

PASCAL FROM ORPHEUS

Unlike some versions of PASCAL, **PASCAL-64** from *Orpheus* is tape based. This means that the compiler is always resident in the computer's memory, occupying valuable space. More importantly, it means that you cannot run the program without the compiler being present and cannot therefore sell or mass produce any program you have written.

This is not a problem for anyone who just wants to learn how to use the language or tidy-up the programs they write, but is a point to bear in mind for the future when you write a 'best-seller' business suite and want to market it. Disk-based compilers will produce versions of the program that will run completely independently of the compiler. For the beginner, however, a resident compiler is often easier and quicker to use.

```
Program MULTIPLIER (INPUT,OUTPUT);

var First, Second,Answer,Loopvar: INTEGER;

begin
(* this is a comment line *)
  page;
  for Loopvar := 1 to 5 do
  begin
    write('Please Input 2 Numbers);
    read(First); readln(Second);
    Answer := First*Second;
    write('Answer is ');
    writeln(Answer);
  end;
end.

    Example PASCAL program
```

Example PASCAL program

The facilities

PASCAL-64 offers an almost complete implementation of the language which means that it is very good if you want to learn PASCAL for applications on other, perhaps larger, computers. It also has commands to take advantage of many of the features unique to the 64. These include sprite handling and the use of the joysticks and lightpen, as well as commands for hi-res graphics and sound.

The editor, which is used in virtually the same way as the Basic editor for creating programs etc, has all the functions 'missing' from the 64's Basic; AUTO, DELETE, RENUMBER, FIND and CHANGE, the last of these doing a 'replace' on specified strings throughout the program or within specified lines. Programs can only be saved to, or loaded from the cassette deck, which may prove a little restricting if you upgrade to a disk later on.

The manual

This is *not* suitable as a teach-yourself book on PASCAL, and it's pointed out in the introduction. The manual really only serves as a reference book. You will certainly need to buy a good beginner's guide to PASCAL if you are not already familiar with the language.

Those who can already program in PASCAL and wish to continue doing so on their 64 will find the stnadard commands are identical and will only need to learn the '64-specific' commands. The reference section is laid out in alphabetical order, but there is no index. So you have to guess what the commands are for the 64-specific features initially, since the only other way is to go through the whole manual until you find the command you want.



Summary

This is a virtually full implementation of PASCAL, limited only by the fact that it is tape based. And at £24.95 it seems good value for money. It suffers from the disadvantage that it ends up not much faster than Basic, but this is partially offset by the fact that you get all the commands that are missing from Basic. Don't forget to add the cost of a good book on programming in PASCAL if you want to learn the language from scratch.

ADA

This is a very new language, named after Countess Ada Lovelace, reputedly the world's first programmer. ADA has been developed by the US Department of Defence (DoD) to try to provide a 'standard' language for a wide range of defence related projects. In its full implementation the language is so complex that there are

anguage

currently few computers other than large mainframes which can handle the full set of commands and facilities.

ADA is designed to be an alternative to such languages as CORAL, FORTRAN and ALGOL in that it is supposed to have all the advantages of these languages in one package; the result is a language which has drawn heavy criticism for being totally unwieldy, since few people understand every possible aspect of it.

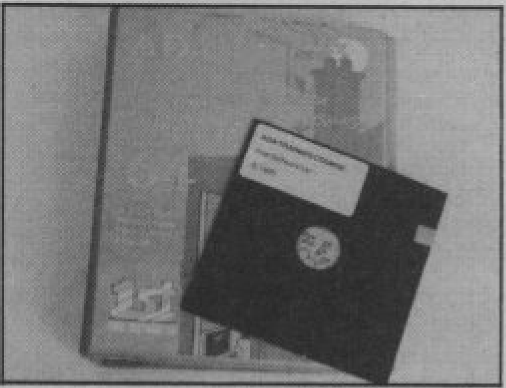
ADA is designed to do everything from controlling missiles or communications systems to doing high-speed scientific calculations. It is a very highly structured language like PASCAL, with a similar format.

THE ADA TRAINING COURSE

As you might expect, the **ADA Training Course** for the 64 from *First Software* is only a very small sub-set of the full ADA language. Nevertheless, it is designed to teach you the format and layout of an ADA program, so that you learn the syntax etc. In theory, this can then be applied to a larger implementation. I say 'in theory' because there are large sections of ADA which cannot be practised on something as small as a Commodore 64. This implementation attempts to get round that by giving you a compiler and syntax checker which will accept virtually any valid ADA statements, even though you cannot get such a program to run. In practice, this is not quite what happens.

ADA — 64 style

Although the package is actually sold as a training course, at the risk of confusing you, this is not the same as teaching you



how to program, using ADA. To get the most out of this package, you should already have a good idea of how to program in a structured high-level language; what this book will teach you is how to apply that knowledge by giving you the appropriate ADA commands to achieve the required aim.

The fact that the latter part of the book goes into great detail about the compiler and ADA grammar only reinforces this view. Anyone who knows only Basic will find this section of the manual totally incomprehensible. Even for the professional programmer, their method of laying out the grammar 'rules' takes a while to work out unless you are already familiar with ADA.

The author says at one point that this is a training package to teach you not just about ADA, but also about the facilities of the Commodore 64 and programming in assembly language; all this in 77 pages! With only seven pages devoted to explaining how the assembler works, for example, I felt the manual tries to cover too many things in too short a space.

Because ADA is designed to be a portable language, it uses machine specific routines for things like Input/Output (I/O), each implementation having a library of routines which the ADA compiler can call on. This has been done in the 64 version, with the result that you can access some of the 64 facilities. These are

```
with TEXT_IO; use TEXT_IO;
with CBM_64; use CBM_64;
--
procedure MULTIPLIER is
--
-- this is a comment line
First,Second,Answer: INTEGER;
--
begin
SCREEN_CLR;
for J in 1..5 loop
PUT("Please Input 2 Numbers");
GET(First); GET(Second);
NEW_LINE;
Answer := First*Second;
PUT("Answer is ");
PUT_LINE(Answer);
end loop;
end MULTIPLIER;
```

Example ADA program

limited to screen control functions such as changing the text or background colour, or positioning the cursor, but there are no commands for such things as sprites, hi-res graphics or sound.

Limitations

Even the commands that *are* implemented are not always complete. For example, the following line is a perfectly valid ADA statement:

BOTTLES := (ROUNDS * CRATES) + (DELIVERIES * SHOPS);

Unfortunately, you cannot have a compound expression like this on the 64 version; it will not even accept an expression like **JOHN := (FRED + 4) * 2.** In fact, the manual does not even mention the use of parentheses, which for an ADA teaching aid is quite inexplicable. Not only that, but if you do use parentheses the compiler fails as soon as it sees this line for the first time, despite the claim that it will at least carry out the lexical and syntactic check on a valid ADA statement.

I tried a number of the small examples in the book and they all worked. However, when I tried to convert a Basic benchmark program into ADA, to see just how much faster the compiled ADA version was, the program compiled without any errors, but just went into an endless loop when run. The program was only about ten lines long and very simple, so it appears that there may still be one or two bugs in it.

Summary

At £49.99 this has the potential to be a good training package for ADA. But don't think that you will actually learn ADA by buying it; you will also need an introductory book to cover the very large areas of ADA that this version leaves out. While I realise that it is not possible to run a larger implementation of the language on a 64, there is scope for improvement in the manual, even if only to tell you what can be done in ADA and which are the keywords that the 64 version will run.

If you are likely to come across ADA in your work, or need to have an understanding of how the language is structured, then this is the only package I know of that can go some way toward helping you, provided you realise its limitations.

PROLOG

PROLOG is one of the new Artificial Intelligence (AI) languages. As such it is very similar to LISP and anyone who knows LISP will be quickly at home with PROLOG. The name is formed by the idea behind the language: PROgramming in LOGic. It is a very 'English' type of language, especially when used with the 'Simple' front-end, of which more later.

It is designed to enable the programmer to build up a 'knowledge base' by means of a number of rules and facts and then to interrogate this 'knowledge base' to give the answers to questions which are put to it.

This is a very simplistic overview and in practice PROLOG can be used in such things as 'expert-systems'. This is where the knowledge of an expert in a particular field can be stored in a computer and then used by a less experienced person to solve problems or obtain the answers to questions that would otherwise need the knowledge of the original expert.

Like many of the other programs being looked at, PROLOG is a large, complex language and therefore a smaller version is implemented on machines like the 64.

MICRO-PROLOG

Micro-PROLOG is the 64 version of the language from *Logic Programming Associates*. It includes an extension called SIMPLE, to permit a 'direct' mode of operation which is very useful for getting quick results when you are learning, plus a MITSI extension which is intended for use in the education field.

Create a Knowledge Base

Micro-PROLOG works by defining *rules* and *facts*. A 'fact' such as 'FRED likes JANET' is written in the form **likes (Fred Janet)**. Note that this is strictly a one-way relationship; if we want Fred not to be disappointed we must add either more facts or perhaps a rule.

If Janet is a friendly sort of person we might have a rule **likes (Janet x) if likes (x Janet)**. In other words, Janet likes anyone who likes her!



We can then interrogate the Knowledge Base with a question in the form **is (likes (Janet Fred))** to which the answer would come back **YES**. We could ask the question a different way: **which (x: likes (x Janet))**, to which the reply would be **Fred**.

Once you have built up a whole array of rules and facts, then the power of a language like PROLOG becomes apparent. For example, you don't have to know in advance what questions you want to put to the computer, although obviously, in order to answer a question, there must normally be a rule or fact governing the relationships in question.

One thing you will realise is that PROLOG assumes that if something is not actually specified then this is the same as being specified that it is *not* so! To clarify that; if we say IAN and JOHN smoke and that FRED drinks, and then ask the question 'Does FRED smoke?', the answer will be 'NO', even though we have made no actual mention of FRED and smoking.

The manual(s)

There is only one manual, but the package also includes an introductory book called **Start Problem-Solving With PROLOG**. This proved to be absolutely invaluable, because I had great difficulty understanding the manual itself. Apart from finding out how to load the programs, you can almost afford to ignore the manual completely; the book is extremely good and very clear. Without it, I think I would still be trying to work out how to define my first fact! Taken together, these two 'manuals' will enable you to build up a good knowledge of Micro-PROLOG and apply it to many areas of work.

Summary

Micro-PROLOG is a comprehensive implementation of PROLOG, suitable for beginner and experienced programmer alike. The manual takes a bit of following, but this is more than compensated by the excellent book that comes with it. At £79.93 it will be rather too expensive for many people, but good value if you seriously want to learn PROLOG.

THE 'C' LANGUAGE

The **C** programming language was created in 1972 as a programming tool in the development of the UNIX operating system. It is a development from a previous language called, would you believe, **B**; original huh? Because of its origins, **C** is a very powerful language for program development; many of the programs which appear as machine-code games or business utilities will have been developed in **C** and cross-compiled into the code required for a particular processor, eg 6502 or Z80.

It is also a very compact language, for two reasons. Firstly, it is very efficient and does not produce a lot of redundant code and secondly, it can call sections of itself from disk when compiling so that it takes up very little space in memory.

C-POWER

The 64 implementation of C is **C-Power**, from *Pitman Publishing*. The complete package consists of a double sided disk, a 'loose-leaf' manual and a very large book entitled *C Primer Plus*. I think the 'Plus' must refer to its size; all 529 pages of it! Actually, C is sufficiently different to many of the other languages that you'll need a good tutorial and it is just as well that one is provided because the manual takes a little bit of following in places.

With a package costing £120, I expected something better than 44 pages held together by one staple, a bit flimsy considering the use it will get. However, the book and manual together give a comprehensive coverage of the language and it should certainly be possible to learn it from scratch if you are keen.

The facilities

The language itself has only a small number of commands, but its power lies in the range of 'function libraries' which are provided to carry out all the actual tasks such as I/O, maths routines, array sorting, and a whole load more. These are all listed in the manual (31 pages) with an index. Because the 64 does not have an operating system as such, there are a few compromises over standard C running under UNIX; these are pointed out however.

Program modules, or 'functions', can call any other functions in the program, including themselves, allowing true recursion. Machine-code routines can also be called in order to speed up a particular routine or to take advantage of a specific feature of the host computer. Once you've got used to the symbols used in C, you will find that program 'modules' can be written very easily. Unfortunately, some of the symbols do not appear on the 64's keyboard so you have to try to remember



which keys have been 're-allocated' to show them.

Compilation, for those not used to it, takes a long time, but this is a fact of life with compiled languages. It does make sure you check the program code thoroughly before you compile it, though, especially if you have been used to letting the 'SYNTAX ERROR' find all your typing mistakes. However, even this has been considered and one of the two excellent editors includes a syntax checker. The editors are more like word-processors in fact, which, since they assume an 80 column screen, is quite essential.

Summary

C is a powerful development language and this implementation must come as close as it's possible to get on the 64. Once you have sampled the possibilities of this language you will find it difficult to go back to even a structured Basic, let alone Commodore's version 2.0!

Unfortunately, the price of £120 will put it out of reach of most people, but for those who can justify the cost they will find it money well spent in the long run. I would like to see a much better manual, both in terms of content and construction, but this is a minor irritation when you take the package as a whole; *C-Power* is the best thing since the Spanish Armada.

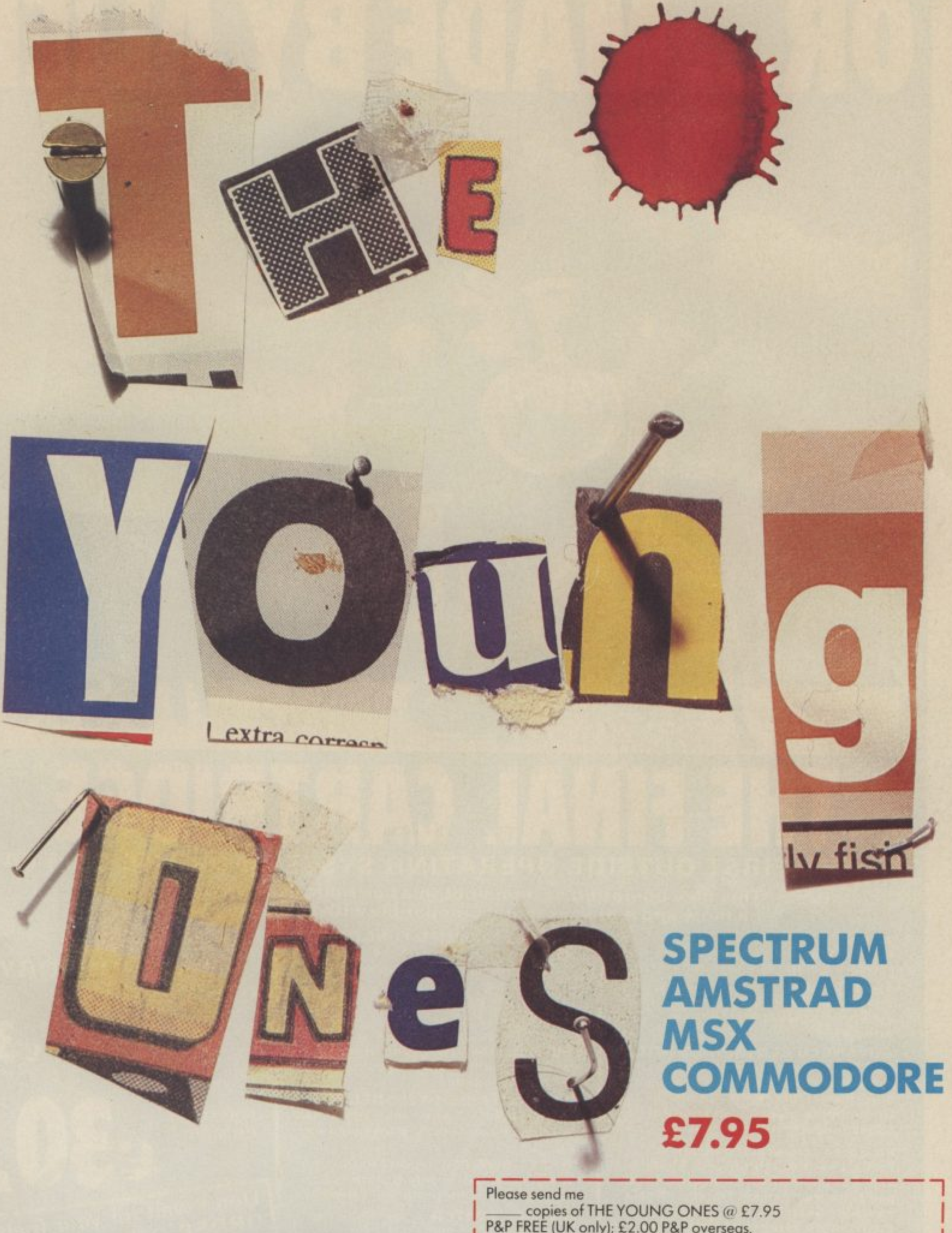
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Item:	The ADA Training Course
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Supplier:	First Software Ltd
Tel:	07357 5244

Item:	Micro-PROLOG
Price:	£79.93
Supplier:	Logic Programming Associates Ltd
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KERMIT GOES TO DISN

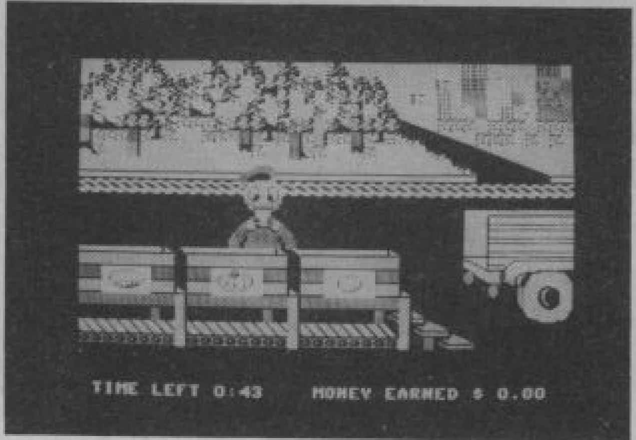
Educational computer games have always been a turn-off for youngsters, simply because they're too boring. But US Gold is set to change all that with a whole series of games based on Walt Disney and Muppet characters. So now it's over to Donald Duck, Winnie the Pooh and Kermit . . .



Educational games have never really taken off because it's very difficult to achieve that crucial mix between learning and fun. You either learn and get bored or have fun and stay dumb.

US Gold obviously thinks it's onto a winner with its new Disney and Muppet series because youngsters (even oldsters) just can't resist old favourites like loud-mouth Donald Duck, podgy Pooh Bear and that lovable lump of green felt, Kermit.

They are the product of exclusive licences between US Gold and Walt Disney Productions and Muppet Productions, which give US Gold the right to distribute existing American Walt Disney software produced by Sierra On-Line and



Donald does some fruit-packing to earn money.

create programs based on future films as well as the character licence of Walt Disney and Muppet characters.

The name of the game is 'edutainment', another grizzly piece of jargon which means that educational programs are presented in such a way that you don't realise you're learning while you're having fun. Let's load up the first game and see what Donald Duck is up to.

Donald Duck's Playground

Donald Duck's Playground is more obviously educational than the other two as well as being the best of the bunch. Donald's task is to build a playground for those three little brats, his nephews. But first he has to earn the money to buy the parts: swings, tyres, slides and lots more. Luckily, there are plenty of job opportunities in Disneyland so Donald can work for McDuck Airways, the product market, the toy store or Amquack Railways.

The entire range of activities involved in transacting money is designed to give kids an understanding of the various units, relative values of coins and notes, budgetting, counting money and working out change. Working in the airport involves matching sets of letters, while other areas provide simple memory tests and time-telling.

A sharp-eyed player will notice some very nice touches. One of these is that Donald looks both ways whenever he crosses the road. All the characters are very realistic, and the animation and use of sound are complementary — two aspects which are not always found in games for young children. They are essential to provide an incentive to use the program. There are also three levels of play if you want faster action and higher scores. And, of course, that's exactly what you'll want.

Kermit's Electronic Story Maker

Let's roll back the curtain because, heeere's Kermit, complete with the rest of the crazy Muppet gang. Described as a spin-a-word writing kit for kids of all ages, you build up sentences from words contained in an in-built dictionary which are then illustrated graphically on the screen.

First, though, you have to set the scene. There are twelve different backgrounds, all with their own theme tune, ranging from a cave, city, jungle, library and space. Then you choose a character from the 21 available — there's all the Muppets as well as several animals, a monster and a tuba! Finally there are 19 verbs including dance, spin, moo, fly or sleep. Once you have chosen the necessary words it's time to animate them.

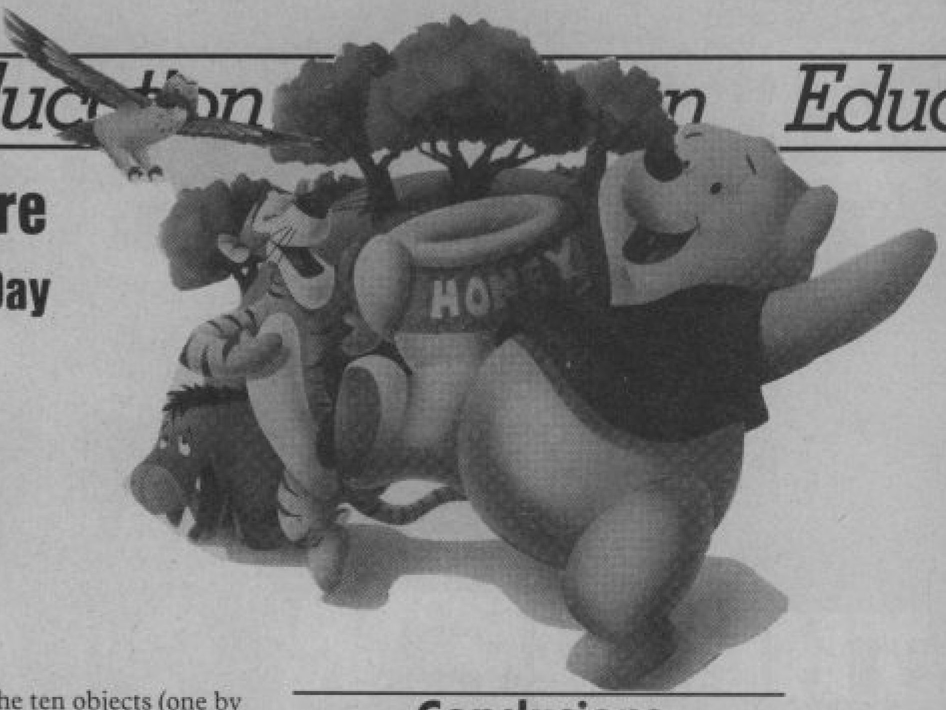
Length of sentences vary both in size and complexity. A short sentence might be, "The cow is on the moon", while the

Donald drives a hard bargain but Micky's not giving credit.



Latest 64 educational software reviewed

by Valerie Day



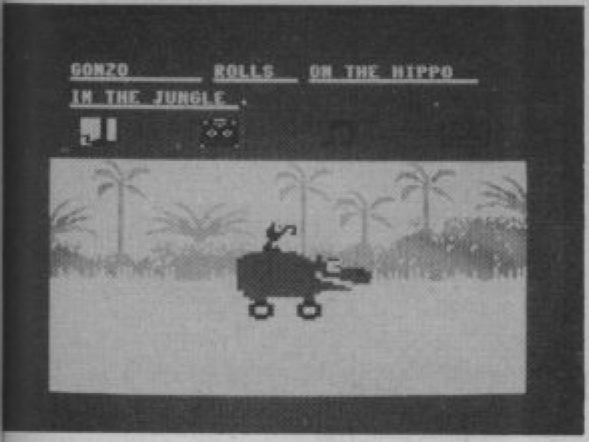
EYLAND



next page might have space for a longer one such as, "On the moon, Miss Piggy dances in the rocket away from the rat". Prepositions are added for you.

The seemingly complicated task of choosing names and verbs has been simplified by making the whole process joystick-controlled. You simply press the fire-button to make a selection. Then you turn over a page to create another story by moving a cursor to the far right of the screen. To move back you move the arrow off to the left of the screen. Finally, you can save your work on disk, play it back or correct it.

Children will have lots of fun composing scenes, though they might need an adult's help for some of the words. A complete list of words in the program, with illustrations, comes with the pack as well as instructions for saving stories.



Going for a ride with Gonzo.

Pooh in the woods

Perhaps the most charming of the three games is *Winnie the Pooh in the Hundred Acre Wood*, featuring the old honey guzzler himself. Very different from the other two games, this one is an adventure with all the features you would expect to find. It comes with a map of the thirty locations and you move between them using the instructions north, south, east and west.

Christopher Robin's playroom is the first scene. We read that the blustery wind was blowing in the night and that it was so strong that the wood's residents — Kanga and Roo, Eeyore, Piglet, Christopher Robin, Rabbit and Mr Sanders (alias Pooh) — have mislaid some of their belongings. It is your job to find the ten objects (one by one) and return them to their owners.

Accompanying information gives you lots of hints as to what belongs to whom. For example, you read that Rabbit is a keen gardener, so when you come across the hoe, simple deduction tells you it is his. You are also told that if you are stuck, Owl is there to help you out because, from the top of his tree, he can see everything going on in the wood — he's a right know-all.

Also provided is a map with all the locations on it. So if you find yourself with a balloon in the dead tree and think that it belongs to Roo, you'll know to go north. Each time you play, the items are to be found in different locations, so there's always a new challenge.

There is a line or so of text on each frame. It could be asking you what you want to do next, an explanation why a site has a particular name (such as Where the Woozle Wasn't) and lots of other interesting facts and figures.

In this program, more so than the others, it is essential to be able to read. You also have to use the keyboard, but children soon learn where the letters are. Other than that, they will have no problems at all, and will find the style of the program thoroughly motivating.

Piglet joins the other Pooh characters to search for their belongings.



Conclusions

There are very few educational programs written for children to use at home that are as nice as these. Mirrorsoft is the only other company that has managed to write good adventures for children. They are a refreshing change from many of the boring educational games that really don't deserve a second look. In any case, I'm a sucker for Kermit.

US Gold is planning to bring out more Disney and Muppet programs soon. First out will be Micky Mouse and Gonzo programs followed, rather later, by games based on the *Black Cauldron* and *Return to Oz* films. □

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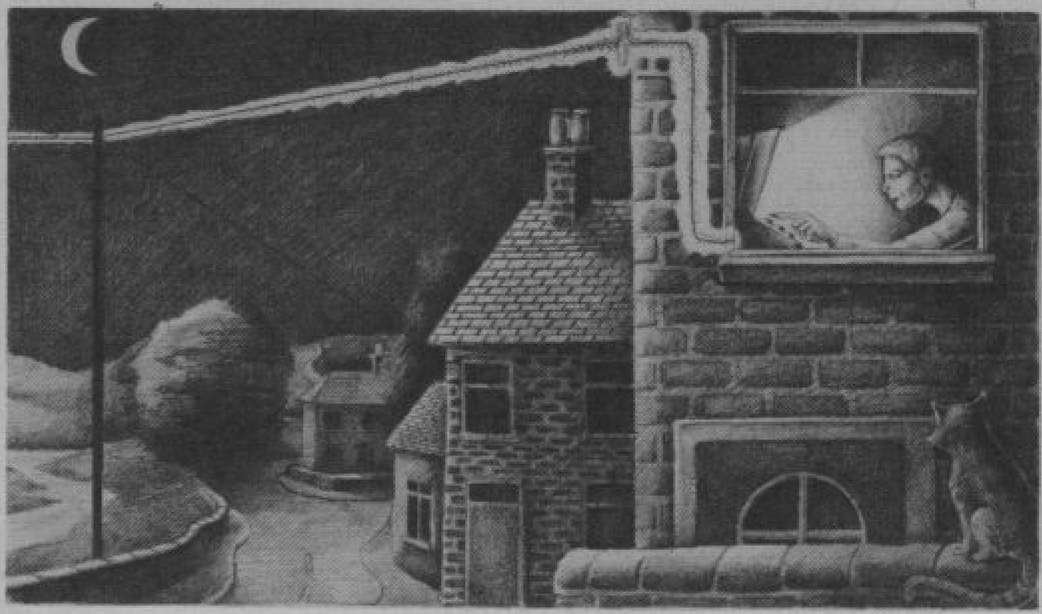
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Caught in the nets

A guide to getting into communications

Isn't it about time you bought yourself a modem and joined the communications age? If you've succumbed to the glossy ads but don't know what equipment you'll need, how much it will cost and what all the jargon's about, read on.

by Robert Schifreen

To link a computer to the telephone, the first thing you need is a phone and one of those nifty little plugs that connect your phone to the wall, together with the appropriate socket.

Incidentally, you may have seen those DIY kits in various electronics shops that contain everything you need to install your own extra phone socket. What they don't tell you, however, is that installing phone sockets is currently rather illegal under the 1984 Telecommunications Act.

It's true that you don't need to rent phones from BT any more — you can just walk into John Lewis and buy one. But make sure that the socket you connect it to has been installed by the person with the little yellow van, and that it has the approved green triangle on the bottom.

WHAT NEXT?

So you have a phone installed. Now you'll need a box called a *modem* to link the computer to it. This is because the phone network operates on audio tones (noises) while computers communicate with electric voltages. Squirting voltages down the line can do nasty things to an exchange.

So a modem converts the computer's signals into audio tones for transmission down the line and converts incoming audio tones back into electrical voltages for the computer to deal with.

If you have a Commodore 64 or 128, there are two big commercial systems that you can subscribe to. These are mainframe computers that you can link your micro to, via the modem and the phone. One is *Micronet 800* and the other is *Compunet*.

Any modem capable of operating at 1200/75 baud (see the glossary later on if you're confused) will get you into Micronet. Compunet, on the other hand, is only accessible by owners of the official Commodore modem. Luckily, this also gets you into Micronet. So, if you don't want to be caught short, buy the Commodore modem. This plugs straight into the cartridge port on the 64 or 128 and connects to the phone line through the cable supplied.

SUBSCRIBING

Compunet have just moved offices and are now at 7-11 Minerva Road, London NW10 (01-965 8866). Micronet are at 8 Herbal Hill, London EC1 (01-278 3143). Give them a call and ask for the necessary application forms. Once you are a member, you can log on to Compunet or Micronet, depending on which you have joined. Connecting up is simply a matter of dialling the number, waiting for the computer at the other end to answer and then switching on the modem. Then you can talk to the computer at the other end by typing commands on your own keyboard.

WHICH ONE TO JOIN?

If you only want to join one service, the following facts may help you make up your mind which is the best for you.

Micronet runs on the Prestel computers — a large viewdata service run by BT, although Micronet is editorially independent. Micronet does now own Prestel, so they have no control over the inefficiencies or occasional unavailability of the system.

Compunet is part of the ADP Network Services company, which operates a national network of computers for business use. Because Compunet owns (indirectly) its equipment, it has programmers available to update or improve the system, often at the request of users.

One new feature just launched on Compunet is *Partyline*, where you can chat 'live' via your keyboard to a number of people simultaneously. Heavily used, say Compunet, by children, pensioners and disabled people. The beauty of this type of conversation is that the only facts people know about you are what you choose to tell them. So no-one need know your age, colour, sex, politics or the colour of your socks.

Micronet caters for around 17,000 micro users, of which around 5000 are registered Commodore owners. A subscriber has access to the whole database, including most of the Prestel system. Micronet publish at least one Commodore feature article every day, five days a week and at least four general micro news articles a day, seven days a week including Christmas.

There are two Commodore areas on the database, one run officially by Micronet, and one by an enthusiast from a bungalow in deepest Lincolnshire.

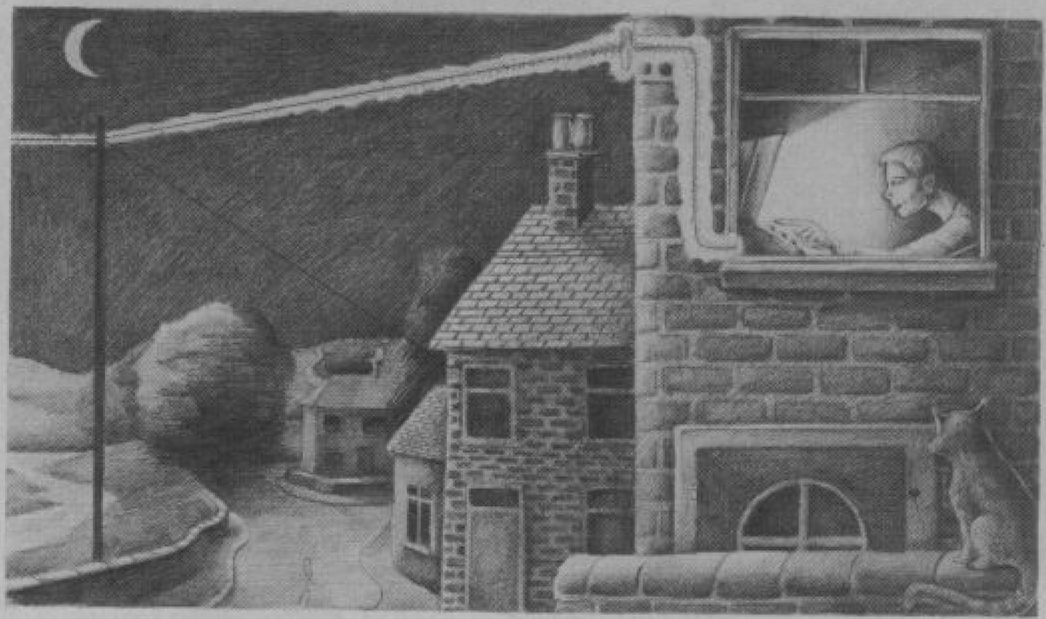
Compunet has around 6000 subscribers, who have access only to the Compunet database. Many times smaller than Micronet's, but aimed only at the Commodore user. Very user-orientated. A few articles are published on the system by the staff, but users are asked to submit their own articles, programs, etc. Teleshopping is available, but still no sign of the home banking service which was promised at the launch.

Compunet was criticised fairly heavily at launch for being rather slow. Often you would type a command but nothing would happen for half a minute. Some of the system has since been speeded up and work is still continuing. The whole system is currently being rewritten for transferring onto new machines but this won't happen for a few months yet.

The main reason for Compunet's lack of speed is that the system is error checked, resulting in error free data but at the cost of speed. The system was developed mainly for the homebanking facility, but this is still not available.

Micronet is available for the cost of a local call to around 97% of the UK. No connect time (i.e. it's free to use, apart from the phone call) after 6pm weekdays, Saturday afternoons and all day Sundays.

Compunet has only around 20 local phone numbers, so you may be unlucky if you live in an area which can only reach Compunet by long distance dialling. More local numbers are being launched, which should reduce costs. No connect time after



6pm weekdays, or all day at weekends.

In the beginning, owners of the Commodore modem used to get their first year's subscription to Compunet for free. Micronet are claiming at the moment that, as these people start to get billed for the service, they are switching to Micronet instead. We wait and see.

Both companies have realised that telesoftware has two limitations. Firstly, not all software houses are willing to have their programs distributed that way. Secondly, some programs just aren't made for this sort of distribution. *Frank Bruno's Boxing*, for example, would take around 50 minutes to download. So they're both now offering mail order software.

USING BOTH SYSTEMS

The Commodore modem can be used to access Micronet and download telesoftware from Prestel. This includes not just material from Micronet, but also the handful of other companies who publish programs on Prestel.

You will need a piece of software called *Mustang*, which teaches your Compunet modem how to be a Micronet one. It costs £11 (disk) or £8 (tape) and is available from Micronet. Various companies are about to launch *Mustang* modems including *Pace, Modem House* and *Tandata*, but beware that these probably won't allow access to Compunet.

WORDS OF CAUTION

If you've read all the way to here, you must either be truly hooked on the idea of comms or you're one of those strange people who always read the last part of an article first.

Assuming the reason is the former, then now is as good a time as any to buy a modem and start communicating. However, you should make sure that you know how much this thing is going to cost you *before* you start. Be prepared to pay around £100 to get on-line. This should buy you a modem and a year's sub to either Micronet or Compunet.

And if you always thought your phone bill was big, just wait till you see the next one. If you use the modem at cheap rate for, say, an hour a night, expect your quarterly bill to increase by at least £50.

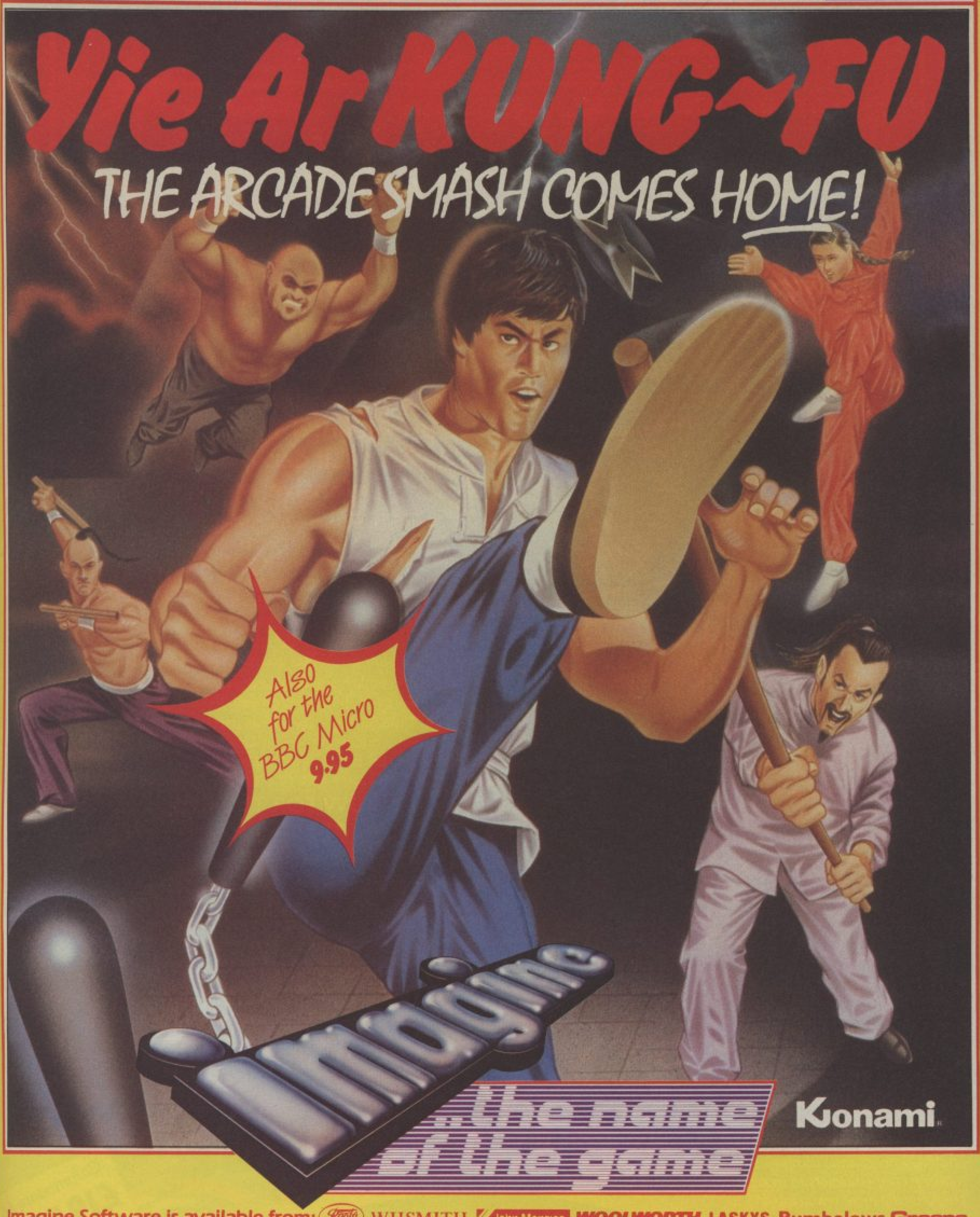
Oh, and be prepared for phone calls from friends along the line of "Hey, what happened to you last night? I was trying to call your for four hours but your phone was always engaged."

THE WORDS YOU NEED TO KNOW

The age of the modem has brought with it some strange new words. Many of them are highly technical and even more boring. Some, though, are useful to know. Log on to any of the networks of an evening, and you're bound to find messages from users old and new saying things like "Does anyone out there know what split baud rates are? Apparently my modem can do them, but what use are they?" If that's you, then cut out the following and stick it somewhere handy.

- **Baud rate:** Pronounced bored, though some think that it rhymes with toad or loud. It's the speed at which your micro can talk to Micronet or Compunet, and the speed at which it can talk back. For almost all systems of communication, a speed of 10 baud is about 1 character per second. So a 300 baud system communicates at 30 characters per second (cps).
- **Split baud rate:** This means that the speed at which a computer can receive information is not the same speed at which it sends. 1200/75 baud is the speed of Prestel. This means that, although Prestel sends you information at 120 cps (1200 baud), the things which you type on your 64 only go to Prestel at 7.5 cps (75 baud). This is quite adequate, as not many people can type much faster anyway. It's cheaper too.
- **Full duplex:** Telephones are full duplex. If you're talking to a friend and he is talking to you, you can both hear each other at the same time. Compare that to a police radio, for example, where only one person talks while the other listens. Then, when the speaker says "over", you swap places. That's half duplex. Micronet and Compunet are full duplex, which means that, while they're sending you information down the line, they're still listening in case you want to interrupt them.
- **RS232:** The RS232 interface is the circuit used to send data down two wires. Often used to link a computer to a printer, and especially useful when it comes to linking computers to the phone, as the phone system has only two wires.
- **Hayes:** The most popular modem in America. You control it by giving it commands from the keyboard. It will automatically dial numbers for you, and handle just about every baud rate available. Modems advertised as Hayes-compatible use the same commands as the original. See CCITT and BELL for the reason for the lack of Hayes modems over here.
- **Call back system:** A new way to stop hackers. Suppose you are Mr Austen and have an account on some top secret computer system. You would call the computer with your modem and type in your name and password. Once the system accepts you, it would hang up the line and then call you back. You would then enter your password again, and away you go. The computer knows your phone number, so it knows where to call you back. This means that, if a hacker managed to get into the computer, it would call the owner of the account back, and not the hacker.
- **Telesoftware:** Programs that run on your micro, but stored on, say Prestel, for you to receive into your micro down the phone. Once there, they can be saved, listed and run. The cost of the program can be added to your Prestel bill.
- **CCITT:** The standard system of tone frequencies used in the UK for transmitting data down a phone line. If you want to impress your friends, it stands for Comite Consultatif International Telephonique et Telegraphique.
- **BELL:** The American system of tone frequencies. The US version of CCITT. However, the frequencies are not the same as ours. In fact, some of the BELL frequencies are rather close to the tones used by BT to control exchanges. For this reason, it's illegal to use a BELL modem over here.
- **Viewdata:** The format used by Prestel. Information is split into a screen of 24 lines of 40 characters. Seven colours and limited graphics are available.
- **Error checking:** Methods for one computer to check that the data it sent over the phone has been received correctly by the other computer. One common way is as follows. Suppose that Prestel is going to send a user's micro a list of numbers down the phone. Once they had been sent, the Prestel computer could say to the micro something like "the numbers I just sent should add up to 1065547". The micro would then check that the numbers it received add up to that total. If they do, it's fairly safe to assume that the data made it safely from one end of the line to the other. If the totals differ, the micro would automatically ask Prestel to retransmit the numbers.
- **Teleshopping:** Being able to buy mail-order goods by tapping in your credit card number.
- **Bulletin Board:** A small version of Micronet or Compunet, run on a micro by hobbyists known as sysops (system operators). They can usually cope with only one call at a time, but users can leave messages on the system for other users. All are free to use. Lists of such systems, including their telephone numbers and baud rates are published in various magazines. □

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Disk nibbler

***Dear Tommy*, I understand it is possible to use double-sided disks in the 1541 disk drive. I would be obliged if you could possibly let me know how to go about using both sides.**

It is not possible to use both sides of the disk *at the same time* to give twice the capacity because the 1541 drive has only got one read/write head. If you want to use both sides you must turn the disk over and insert it upside down. However, before you can write to the disk you must cut a small 'read-enable' notch on the opposite side of the disk jacket. While it is possible to buy a piece of equipment called a 'nibbler' to do this (at around £6-£10!), it is just as simple to cut it out with a small sharp knife, using another disk over the top to act as the template.

While it is possible to do this with so-called 'single-sided' disks as well, the reverse side is not guaranteed to be error free, so don't use that side for anything really important. You should also note that turning the disk over changes the direction of rotation. This *can* cause problems with some disks since the jacket has a lining which traps any dirt; when you spin the disk the wrong way this dirt could be released, causing disk errors.

16 Screen Scene

***Dear Tommy*, Please could you tell me some interesting Pokes for the C16. For example, a poke to change the size and position of the whole window in indirect mode. There was an article like this in one of your earlier editions and it helped me a lot on games programs and effects.**

The screen window is controlled by four memory locations as follows:

Bottom — 2021,
Top — 2022,
Left — 2023,
Right — 2024.

The values normally held are 24,0,0,39 respectively for the full screen, but you can POKE values between these limits to give you any size window you require. The following program example sets a series of ever smaller windows, fills them and then prints some graphics in the final window (To reset the screen to normal, type **GOTO 1000**):

```
10   REM WINDOWS DEMO
20   BT = 2021:TP = 2022:LF = 2023:R-
     T = 2024
25   CL$ = "<BLU> <YEL>
     <GRN> <PUR> <CYN>":
     PRINT"<CLR>";
30   SC$ = "<REV ON> <40
     SPC>"
40   FORL = 1TO10 STEP 2
50   POKELF,L:POKERT,39—L:
     PRINT"<HOM>";
70   PRINTMID$(CL$,L,1)
80   FOR A = 1 TO 22—(2*L):
     PRINTLEFT$(SC$,41—(2*L)):
     NEXTA
90   PRINTLEFT$ (SC$,40—(2*L)):
     POKE3072 + ((23—L)*40) +
     (39—L),160
100  NEXTL:PRINT"<CLR>";
110  FOR A = 1 TO 64:
     POKE1339,A:PRINT "<20
     SHIFT V>"
120  FOR DL = 1 TO 100: NEXT
     DL,A
130  END
1000  POKEBT,24:POKETP,0:POKE
      RT,39:POKELF,0:
      PRINT"<CLR>"
```

Note the use of EasyEnter type command strings in the program. Press the appropriate control keys in place of any <XXX> type string.



Tommy is our resident know-all. Whether you've got a technical problem on the 64, 16 or Vic, Tommy's at the ready with pearls of wisdom, advice and information. Go on, write to him: Tommy's Tips, Commodore User, 30-32 Farringdon Lane, London EC1R 3AU.

Sound of Silence

***Dear Tommy*, Recently I had trouble with a sound program I was developing so I went to basics and wrote out the basic sound program:-**

```
10  S = 54272
20  FOR A = S TO
    S + 24:POKEA,0:NEXT
30  POKES,75
40  POKES + 1,34
50  POKES + 4,17
60  POKES + 5,9
70  POKES + 6,240
80  POKES + 24,15
90  FOR T = 1 TO 1500; NEXT
100 POKES + 24,0:END
```

Well I thought this program looked neat and tidy with the poke registers in numerical order, but it doesn't work. And after a lot of playing around I found that a POKES + 6 order must be placed before the POKES + 4 order, the list order of the rest of the program twixt lines 20 and 80 can be anything else but the positioning of the S + 4 and S + 6 seems to be crucial.

I like to have a reason for most things but I can't work this one out, and I can't find it in any of my books. Can you slake my curiosity Tommy?

The solution is quite simple really; 54272(S)+4 contains what is called the 'control register' of Voice 1. In addition to its other functions, setting Bit 1 of this register activates the voice, causing it to make a sound according to the way the other registers are set. In order to actually be heard, the voice must have the ADSR (Attack, Decay, Sustain and Release) registers set correctly. If they aren't, the result is silence. Since locations (S+5) & (S+6) control these settings, it follows that these must be POKEd with the correct values *before* you set the control register and trigger the sound.

Split input

***Dear Tommy*, I recently wrote a simple program on the SX 64 I keep in the office. When I brought the disk home and tried to run the program on the ordinary Commodore 64 here, I got the "redo from start" message after one of the input lines. For some days I could make no sense of this.**

Eventually I wondered if the input line was too long. It extended (almost) to 80 characters, i.e. two screen lines. I split the line into two separate lines, the first "PRINT",

and the second "INPUT", and it worked perfectly. Have I stumbled across a difference between the SX 64 and the Commodore 64? Or is one of my machines not functioning properly? I have never seen anything in the magazines about this. Might it help others if the point were aired in your column?

Your 64 is not faulty, but you have discovered one of the little bugs in the ROM. When an INPUT line goes over 40 columns, the 64 looks at the second line of the INPUT string as part of the input from the keyboard. If you are trying to INPUT a number and the INPUT 'string' consists of characters, then you will indeed get the error you mention. You have also found the only solution; split the INPUT string into two statements to ensure that the INPUT prompt does not extend over 40 characters.

Plus/4 modem?

***Dear Tommy*, I own a Plus/4 and I am thinking of buying a printer and modem.**

Could you tell me the difference between anMPS801 and MPS803? Also are there any modems on the market for a Plus/4? I look through all the adverts in your magazine but can't find any.

According to my information, the two dot-matrix printers intended for use with the Plus/4 are the MPS 801 and the MPS 802. The latter is faster and uses an 8×8 dot matrix for the characters instead of the 6×7 matrix of the 801. This means that it has true lower case descenders (the 'tails on letters like p q y etc). The 802 also has friction feed, which means that you can use single sheets for letters etc, rather than being limited to using the tractor-fed continuous paper.

As for the MPS 803, that appears to be intended for us with the 128. I have been able to find out very little about it, other than it is a better printer than the 802; more like an Epson in fact. It all really boils down to price. The 801 is the cheap end of the market, really only suitable for program listings, graphics output and 'internal printouts.

The other two printers are both capable of producing a print quality sufficient for most correspondence purposes, as well as everything that the 801 can do. The sort of prices you can expect to pay are as follows: MPS 801 £100-£199, MPS 802 £150-£245, MPS 803 £250-£399 so it will pay you to shop around before buying.

As for the modem, the problem is that the user-port does not provide true RS232 voltage levels so you will also need to get an interface. There are very few modems even for the 64; since Commodore's own modem is completely unusable on the Plus/4 this reduces your options even further. The only companies who *might* produce a suitable modem are Miracle Technology (0473 216141), Modem House (0392 69295) and Tandata (06845 68421). Even they do not have suitable 'terminal' software programs for the Plus/4 and with the rumoured demise of the Plus/4 in the not too distant future I think it unlikely that anyone will produce any.

Backward scroller

***Dear Tommy*, On page 130 of the Commodore 64 Programmer's Reference Guide, there is a short program giving an example of smooth scrolling. When run the program makes the word 'HELLO' scroll continuously from the bottom to the top of the screen.**

I have attempted to write a similar program to put a simple message onto the screen while scrolling from right to left. When you run the program it becomes obvious that something is going wrong.

I would be most grateful if you could help me with this problem. Here is my program:

```
 10 POKE53270,8
 20 PRINTCHR$(147)
 30 FORI=1TO10:PRINTCHR$(17);:
    NEXT I
 40 FORC=55696TO55735:POKEC,1
    : NEXT
 50 POKE53270,0
 60 FORD=1TO18:READW
 70 IFW=100THEN130
 80 POKE1443,W
 90 FORP=7TO0STEP—1
100 POKE53270,P
110 FORX=1TO50:NEXT
120 NEXT:NEXT
130 END
200 DATA8, 5, 12, 12, 15, 96, 5, 22, 5,
    18, 25, 15, 14, 5, 96, 33, 100, 100,
    100
```

I am afraid there are two problems with your program. The first one is that you are not transferring the characters to the next print position once the screen has moved sideways and then back. The result is that all the characters overwrite each other.

However, the more serious problem is that you cannot do a realistic sideways scroll using Basic; it's just not fast enough. You must use machine-code to shift all the characters left (or right) one full character position after the screen has moved back to the original position. The eyes' persistence of vision will still carry the image of the letters in their 'scrolled' position and it is important to get the characters moved *before* the eye notices the fast screen shift back one character.

The following lines added (or replaced) in your program will do what you require; i.e. a sideways text scroll:

```
  5 T=O:FOR L=828 TO
    854:READA:POKEL,A:T=T + A:
    NEXT
  7 READX:IF T< >X THEN
    PRINT"DATA ERROR":STOP
111 NEXT P
115 SYS828
120 NEXT D
130 WAIT 653,1:POKE 53270,8:END
190 DATA169, 7, 141, 22, 208, 160,
    17, 162, 0, 232, 189, 146, 5, 202,
    157, 146
195 DATA5, 232, 136, 208, 244, 169,
    32, 157, 146, 5, 96, 3393
```

The machine-code for the character movement is stored in the cassette buffer. **Line 130** waits for the SHIFT key to be pressed before resetting the screen to full width and ending the program.

16 upgrade

***Dear Tommy*, I want to upgrade my C16 to be like a Plus/4. Do you know where I can get the memory expansion cartridge that is supposed to fit into the slot in the back and will I be able to run all the Plus/4 software when I get it? Can you also recommend a good wordprocessor for the C16, as I want to use it for writing letters.**

I think it extremely unlikely that Commodore will ever be producing a memory expansion unit to fit that slot! However, all is not lost as there is a company producing an expansion board that fits *inside* the C16 and gives you 64k of RAM (60671 free to Basic). It is suposed to be fully compatible with all C16 software and should run the majority of Plus/4 programs as well. The board is made by MCT and your dealer should be able to order one for you; it costs £49.95.

As for a WP program, the C16 is rather short of this type of program since it is mainly seen as a games machine, quite apart from the possibility of being phased out shortly. However, one WP that is available for both the Plus/4 and the C16 is Supersoft's 'Word Perfect' at around £13. If your local dealer doesn't have it, the company can be reached on 01-861 1166.

128 upgrade

***Dear Tommy*, I have a 64 with a 1541 disk drive and a 1701 colour monitor. If I upgrade to the 128 can I still use the 1541 and the 1701 or would I have to change these as well? If I can use the 1541, will I be able to run CP/M programs? Sorry if these questions sound obvious, it's just that nobody seems to know all the answers.**

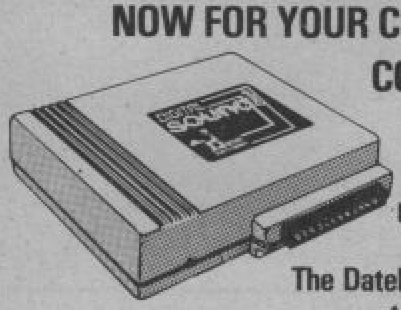
Both the 1541 drive and the 1701 monitor can be used with the 128, but you will not be able to access *all* the facilities. The ones that you *won't* get are 80 columns, the faster disk access and the ability to run 'standard' CP/M programs.

The 1571 disk drive (and the 1570) allow you to load programs and/or data in IBM, QX-10, Kaypro and Osborne formats. You can load the CP/M operating system using the 1541 (in 40 column mode), but unless you could obtain the applications programs in a format suitable for the 1541 (i.e. Commodore format) then this won't be of much use to you. Also, even with the 1570/71 drives, nearly all CP/M programs run in 80-column format.

To be able to use them properly you will have to buy the new Commodore 1901 dual-mode monitor (£300) which has RGBI input for 80 columns and Commodore Video (like the 1701) for 40 columns and hi-res graphics. □

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BMX Trials	1.99	1.75
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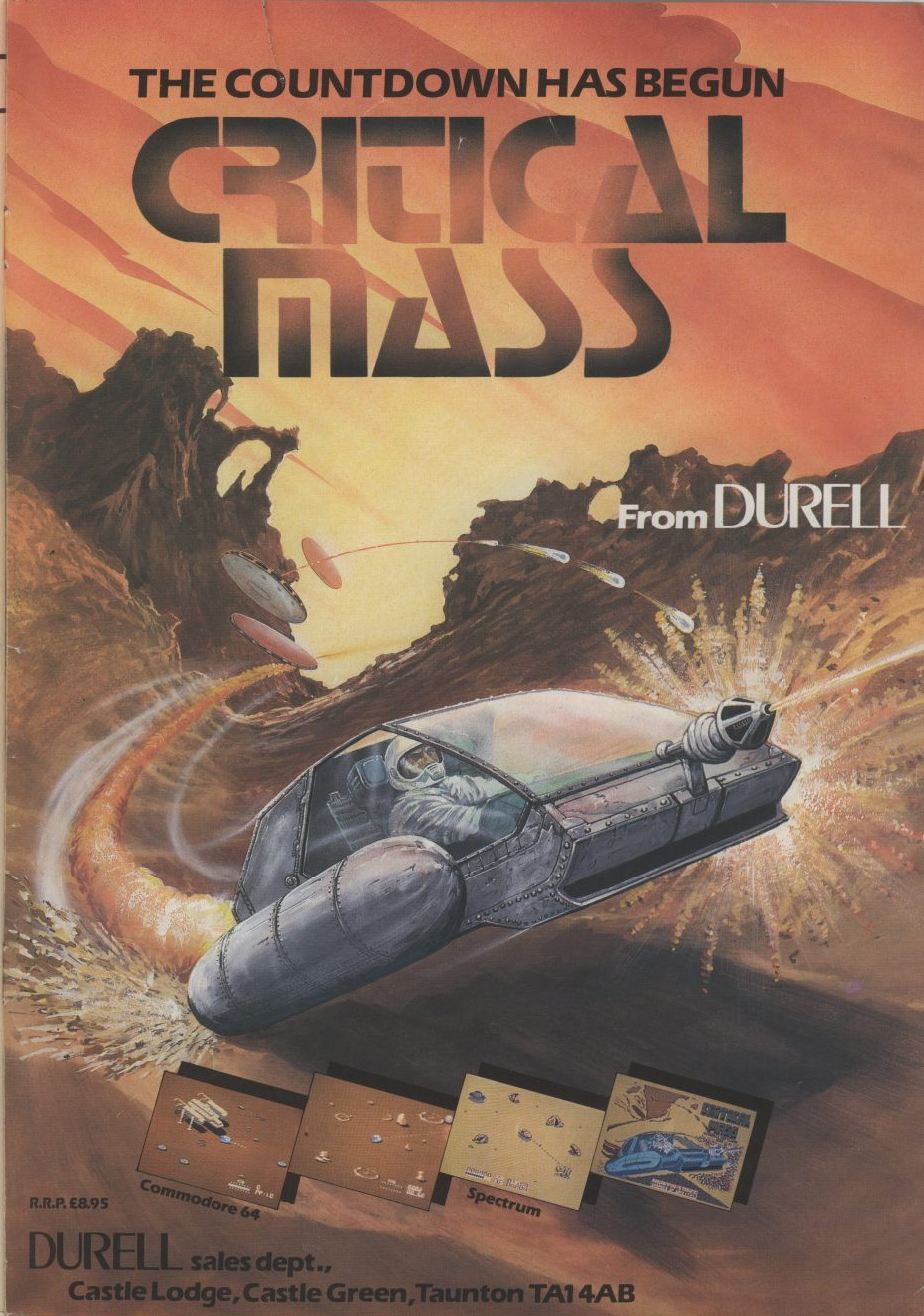
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